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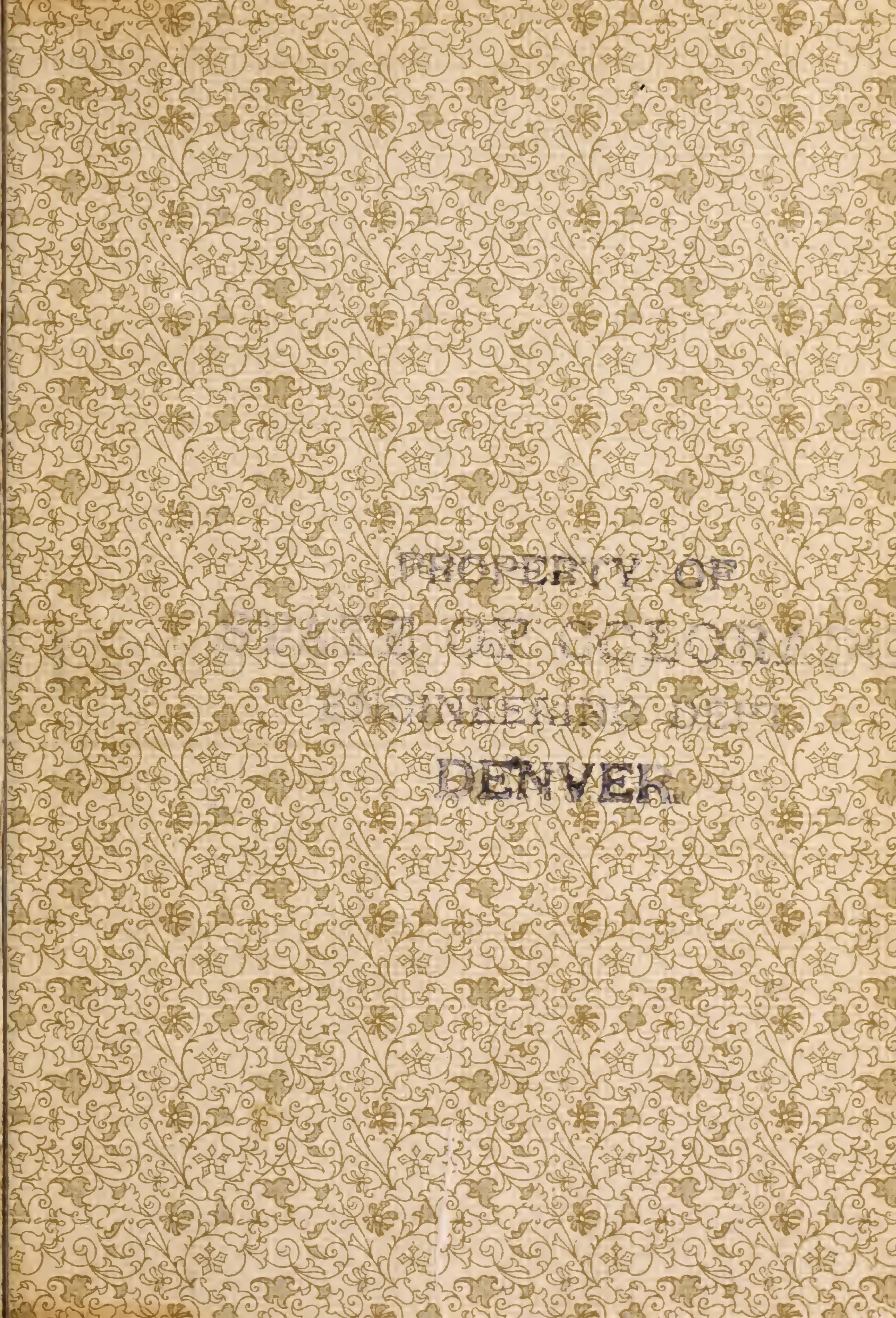

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Twenty-First Biennial Report

OF THE

STATE ENGINEER

TO THE

Governor of Colorado

PROPERTY OF
OF COLO
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DENVER

For the Years 1921-1922

DENVER, COLORADO
EAMES BROTHERS, PRINTERS
1923

LETTER OF TRANSMITTAL

Sir: I have the honor to transmit herewith the Twenty-first Biennial Report of the Office of State Engineer for the two fiscal years ending November 30, 1922.

Very respectfully yours,
ADDISON J. McCUNE,
State Engineer.

To His Excellency,
OLIVER H. SHOUP,
Governor.

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INTRODUCTION

Notwithstanding the somewhat gloomy aspect of farming during the last two years the future of irrigation looks bright within the state.

Our citizens are planning for future extensions and enlargements of many of the present projects and are preparing to launch a number of new enterprises as soon as the times will warrant. People within and without the state are more and more looking upon irrigation as a permanent and growing institution.

Noticeable improvements are being made in all parts of the state in spite of the bad condition of the markets for most farm products. Some improvement is being made in the distribution of water to the end that a much higher duty is obtained than formerly. The Cache la Poudre Valley furnishes, perhaps, the best example of expansion of the irrigated area by better distribution. In 1885 the irrigated area reported was 108,000 acres and the water officials considered the total water supply exhausted. There are now over 230,000 acres and the duty of water has risen to less than 1¼ sec. ft. per acre.

Other parts of the state can do as well by the application of the same skill, so that whereas twenty years ago it was thought five or six million acres was the limit of irrigation possibilities in Colorado, we can now conceive of a time when it may be expanded to ten or twelve million acres. With the additional large area of non-irrigated farm lands (estimated at about 25,000,000 acres) and other millions of rich pasture lands Colorado will loom up as a great agricultural state as well as a great mining state.

The co-operative investigation on the South Platte, described in Chapter IV of the last biennial report, brought quite satisfactory results. This was due to the excellent distribution obtained through the use of automatic gages and to the admirable co-operation of the water users themselves.

The automatics in this case were furnished by the Government and were removed at the termination of the investigation. The work was so satisfactory that the most of the ditch owners desired to have the system continued and signed a petition asking the State Engineer to install new machines, at their own expense, but before doing so the financial depression stopped them. It is believed they will soon adopt the system permanently.

The Arkansas Valley in the spring of 1921 entered into an agreement with this office to install automatics on all the ditches on the main river below Pueblo and several automatics have been installed by private companies with excellent results. We hope to see them on all principal ditches in the state.

The drainage problem has been given considerable attention during the period. Two systems covering together 26,700 acres are under construction in the San Luis Valley at the present time.

This department has continued to keep in mind the fact that water power is one of our greatest resources, and has planned the hydrographic work accordingly when possible. No new power development has been reported for the period. Four applications for permits have been made to the Federal Power Commission.

The various phases of the operation of this department will be treated under their special chapters and, generally speaking, will be classified somewhat as follows:

Office and clerical work.
Financial statement.
Water filings.
Reservoir plans and specifications.
Supplemental statements.
Engineers' license law.

Control of streams and supervision of water distribution through Division Engineers and Water Commissioners. Investigation of Irrigation Districts and Carey Act Projects.

Hydrographic work.

LIST OF OFFICERS AND EMPLOYEES

State Engineering Department

Addison J. McCune	State Engineer
R. G. Hosea	Deputy State Engineer
J. H. Baily	Chief Hydrographer
W. T. Blight	Hydrographer, Division No. 1
G. C. Price To Dec. 31, 1921	Hydrographer, Division No. 2
Leroy T. Burgess Appointed March 1, 1922	Hydrographer, Division No. 2
H. D. Amsley	Hydrographer, Division No. 2
D. S. Jones, Jr. Appointed March 1, 1922	Hydrographer, Division No. 3
F. C. Snyder	Hydrographer, Division No. 4
C. C. Hezmalhalch	Chief Clerk and Draftsman
Ellie H. Rhodes	Filing Clerk
Bessie Clark	Stenographer

IRRIGATION DIVISION ENGINEERS

Div. No. 1	Filmore Cogswell	Denver
Div. No. 2	C. W. Beach	Pueblo
Div. No. 3	E. S. Counselor	Alamosa
Div. No. 4	Heman C. Getty	Montrose
Div. No. 5	A. J. Dickson	Glenwood Springs
Div. No. 6	B. T. Chase	Steamboat Springs

WATER COMMISSIONERS

Div. No.	Dist. No.	Name	Address
1	1	A. H. Cutler	Fort Morgan
1	2	Chas. C. Pearce	Henderson
1	3	W. J. McAnelly	Fort Collins
1	4	H. H. Kelly	Loveland
1	5	J. A. Lee	Hygiene
1	6	James M. Platt	Boulder
1	7	A. E. Jones	Golden
1	8	Louis Bertolett	Littleton
1	9	H. S. Rainwater	Morrison
2	10	W. F. Starsmore	Colorado Springs
2	11	A. M. Carpenter	Salida
2	12	D. S. Jones	Florence
2	13	H. W. Hendershott	Westcliffe
2	14	Joe Burgess	Pueblo
2	15	John Simonson	Buelah
2	16	Bruce Tirey	Walsenburg
2	17	S. W. Cressy	Rocky Ford
2	18	Juan A. Mestas	Aguilar
2	19	H. B. Bostick	Hoehne
3	20	Thomas Carr	Del Norte
3	21	W. F. Neff	La Jara
3	22	B. W. Harrison	Manassa
1-2	23	F. E. Lilley	Jefferson
3	24	Miguel Martinez	San Luis
3	25	John L. Charles	Crestone
3	26	S. O. Proffitt	Saguache
3	27	Jas. Medina	La Garita
4	28	J. Roy Hicks	Sargents
4	29	F. A. Byrne	Pagosa Springs
4	30	George H. Tyner, Jr.	Durango
4	31	No Commissioner	
4	32	No Commissioner	
4	33	Jerry Griggs	Breen
4	34	Hugo Weston	Mancos
3	35	Stephen Calkins	Blanca
5	36	No Commissioner	
5	37	Earl McGlochlin	Gypsum
5	38	Wm. Wise	Carbondale
5	39	Isam W. Graham	Rifle

Div. No.	Dist. No.	Name	Address
4	40	C. H. Luellen	Eckert
4	41	A. J. Baxter	Montrose
4	42	George M. Saunders	Mesa
6	43	F. A. Carstens	Meeker
6	44	Arthur Collom	Axial
5	45	R. S. Glenn	Silt
1	46	Clarence A. Manville	Coalmont
1	47	Clarence Boston	Walden
1	48	R. A. Mosier	Glendevey
2	49	No Commissioner	
5	50	No Commissioner	
5	51	P. S. Elting	Sulphur Springs
5	52	Carl Foster	Sheephorn
5	53	A. L. Plasters	Burns
6	54	E. W. Leggett	Baggs, Wyo.
6	55	No Commissioner	
6	56	No Commissioner	
6	57	C. W. Harkness	Hayden
6	58	E. H. Godfrey	Yampa
4	59	A. D. McKee	Gunnison
4	60	Grover Totten	Redvale
4	61	W. O. Roberts	Bedrock
4	62	Wm. Sammons	Powderhorn
4	63	No Commissioner	
1	64	John M. Shea	Atwood
1	65	John Hultquist	Laird
2	67	H. F. Syp	Lamar
4	68	J. W. Martin	Ridgway
4	69	No Commissioner	
5	70	George F. Newton	DeBeque

CHAPTER I

OFFICE AND CLERICAL WORK

FINANCIAL STATEMENT

Appropriations	1921	1922	Total
State Engineer, salary	$ 3,000.00	$ 3,000.00	$ 6,000.00
Chief Deputy State Engineer, salary	2,400.00	2,400.00	4,800.00
Chief Clerk (Draughtsman), salary	2,000.00	2,000.00	4,000.00
Chief Hydrographer, salary	2,400.00	2,400.00	4,800.00
Four Hydrographers, salaries	7,200.00	7,200.00	14,400.00
Stenographer, salary	1,200.00	1,200.00	2,400.00
File Clerk, salary	1,200.00	1,200.00	2,400.00
Incidental expenses, including salaries of gauge readers, purchase of requipment and repairs on same, installation and upkeep of river measuring stations	1,500.00	1,500.00	3,000.00
Division Engineer, Division No. 1, salary	2,500.00	2,500.00	5,000.00
Division Engineer, Divison No. 2, salary	2,500.00	2,500.00	5,000.00
Division Engineer, Division No. 3, salary	2,100.00	2,100.00	4,200.00
Division Engineer, Division No. 4, salary	2,100.00	2,100.00	4,200.00
Division Engineer, Divison No. 5, salary	2,100.00	2,100.00	4,200.00
Division Engineer, Division No. 6, salary	2,100.00	2,100.00	4,200.00
Traveling Expenses, Chief Hydrographer	600.00	600.00	1,200.00
Traveling Expenses of six Division Engineers	6,000.00	6,000.00	12,000.00
Traveling Expenses four Hydrographers	3,000.00	3,000.00	6,000.00
Traveling and Contingent Expenses State Engineer and Deputy for biennial period			2,500.00

BALANCES TURNED BACK TO GENERAL FUND

Deputies salaries	$ 109.16
Chief Hydrographer's salary	109.16
Chief Clerk and Draftsman salary	66.67
Traveling and contingent fund	267.66
Hydrographers' salaries	300.00
Hydrographers' expense	7.62
Division Engineers' expense	5.87
Total	$ 866.14

STATE ENGINEER—SALARY

Appropriated		$ 6,000.00
A. J. McCune	$ 6,000.00	

DEPUTY STATE ENGINEER

Appropriated		$ 4,800.00
R. G. Hosea	$ 4,690.84	
Balance in fund	109.16	
	$ 4,800.00	$ 4,800.00

TRAVELING AND CONTINGENT FUND OF STATE ENGINEER AND DEPUTIES

Appropriated		$ 2,500.00
A. J. McCune	$ 298.90	
R. G. Hosea	1,000.70	
C. C. Hezmalhalch	33.68	
H. I. Reid	34.10	
W. J. Smith	4.95	
Consolidated Ticket Office	791.28	
State Engineer's automobile upkeep	68.73	
Balance in fund	267.66	
	$ 2,500.00	$ 2,500.00

CHIEF CLERK AND DRAFTSMAN—SALARY

Appropriated		$ 4,000.00
C. C. Hezmalhalch	$ 3,933.33	
Balance in fund	66.67	
	$ 4,000.00	$ 4,000.00

CHIEF HYDROGRAPHER—SALARY

Appropriated		$ 4,800.00
J. H. Baily	$ 4,690.84	
Balance in fund	109.16	
	$ 4,800.00	$ 4,800.00

HYDROGRAPHERS—SALARY

Appropriated		$14,400.00
W. T. Blight	$ 3,600.00	
G. C. Price	1,950.00	
H. D. Amsley	3,600.00	
D. S. Jones	1,350.00	
F. C. Snyder	3,600.00	
Balance in fund	300.00	
	$14,400.00	$14,400.00

TRAVELING EXPENSES FOR HYDROGRAPHERS

Appropriated		$ 6,000.00
W. T. Blight	$ 255.01	
G. C. Price	338.46	
H. D. Amsley	1,258.83	
D. S. Jones	493.97	
F. C. Snyder	1,685.66	
Bethman Motor Co	44.47	
Bagby-Mulnix Motor Co	530.42	
Consolidated Ticket Office	600.00	
Gates Rubber Co	243.96	
Miscellaneous	541.66	
Balance in fund	7.62	
	$ 6,000.00	$ 6,000.00

TRAVELING EXPENSE—CHIEF HYDROGRAPHER

Appropriated		$ 1,200.00
J. H. Baily	$ 1,200.00	

STENOGRAPHER

Appropriated		$ 2,400.00
Bessie Clark	$ 2,400.00	

FILE CLERK

Appropriated		$ 2,400.00
Ellie H. Rhodes	$ 2,400.00	

INCIDENTAL EXPENSE

Appropriated		$ 3,000.00
Gage Readers	$ 2,320.66	
Miscellaneous, gaging equipment, supplies, etc	679.34	
	$ 3,000.00	$ 3,000.00

IRRIGATION DIVISION ENGINEER, DIVISION NO. 1—SALARY

Appropriated		$ 5,000.00
F. Cogswell	$ 5,000.00	

IRRIGATION DIVISION ENGINEER, DIVISION NO. 2—SALARY

Appropriated		$ 5,000.00
C. W. Beach	$ 5,000.00	

IRRIGATION DIVISION ENGINEER, DIVISION NO. 3—SALARY

Appropriated		$ 4,200.00
E. S. Counselor	$ 4,200.00	

IRRIGATION DIVISION ENGINEER, DIVISION NO. 4—SALARY

Appropriated		$ 4,200.00
H. C. Getty	$ 4,200.00	

IRRIGATION DIVISION ENGINEER, DIVISION NO. 5—SALARY

Appropriated		$ 4,200.00
A. J. Dickson	$ 4,200.00	

IRRIGATION DIVISION ENGINEER, DIVISION NO. 6—SALARY

Appropriated		$ 4,200.00
B. T. Chase	$ 4,200.00	

TRAVELING EXPENSE—SIX DIVISION ENGINEERS

Appropriated		$12,000.00
F. Cogswell	$ 1,424.79	
C. W. Beach	2,265.72	
E. S. Counselor	1,504.40	
H. C. Getty	2,821.19	
A. J. Dickson	1,145.16	
B. T. Chase	2,622.87	
Consolidated Ticket Office	210.00	
Balance in fund	5.87	
	$12,000.00	$12,000.00

STATE WATER DEFENSE FUND

South Platte Project—

1921—		
Hydrographers' traveling expense	$ 776.45	
Gage readers	116.28	
Instruments, gages, equipment, etc	131.43	
Total (1921)		$ 1,024.16
1922—		
Hydrographers' traveling expense	$ 961.25	
Draftsman	33.57	
Instruments, gages, equipment, etc	188.69	
Total (1922)		$ 1,183.51
Total for biennial period		$ 2,207.67

Colorado River and Western Slope Stations—

1921—		
Gage readers	$ 669.73	
Hydrographers' traveling expense	814.96	
Drafting maps, records, etc	198.98	
Miscellaneous equipment	42.62	
Total (1921)		$ 1,726.26
1922—		
Gage readers	$ 902.27	
Hydrographers' traveling expense	459.96	
Drafting, maps, records, etc	148.56	
Interstate stations on Colorado and White Rivers	1,167.55	
Total (1922)		$ 2,678.34
Total for biennial period		$ 4,404.63

STATE WATER DEFENSE FUND—Continued

Arkansas Valley Project—		
1921—		
Gage readers	$ 486.03	
"Statistician"	310.00	
Hydrographers' traveling expense	1,032.64	
Instruments	242.01	
Lumber and hardware for stations	239.54	
Office supplies, etc	107.24	
Total (1921)		$ 2,417.46
1922—		
Gage readers	$ 1,185.43	
"Statistician"	1,000.00	
Hydrographers' traveling expense	4,343.88	
Lumber, hardware and station equipment	638.10	
Rent on office at La Junta	37.50	
Office supplies, etc	67.34	
Total (1922)		$ 7,272.25
Total for biennial period		$ 9,689.71
Total from Water Defense fund for the biennial period 1921-1922		$16,302.01

GAGING FUND

1921—		
Gage readers	$ 344.18	
Hydrographers' traveling expense	727.61	
Instruments, gages, equipment	1,124.14	
Automobile	1,001.90	
R. I. Meeker	80.26	
Total (1921)		$ 3,278.09
1922—		
Gage readers	$ 501.80	
Instruments, gages, equipment, etc	676.07	
Total (1922)		$ 1,177.87
Total from Gaging Fund during biennial period 1921-22		$ 4,455.96

Distribution of fees received during the biennial period Dec. 1, 1920-November 30, 1922.

Map filings	$ 9,849.00
Postage	9.19
Blue prints	721.45
Certifications	164.00
Examination of reservoir plans	842.00
Filing transfer decrees	32.00
Office labor	50.00
Sale of gaging supplies	22.80
Recording water deeds	9.00
Total	$11,699.44

WATER FILINGS

During the biennial period there have been filed in the State Engineer's Office 543 maps consisting of one or more sheets setting forth claims to water. Of this number some 85 are for reservoirs, the balance representing claims for canals, pipelines and enlargements or extensions of existing structures.

In the main these filings represent development by individuals for the irrigation of small tracts of land. A considerable number, however, have been made for domestic water supplies, for ranches, summer homes, hotels and small townsites.

A large number of claims give the source of supply as seepage or springs, the idea evidently prevailing that such appropriations are independent of existing rights on the main streams. Several controversies have arisen over appropriations of this nature and lawsuits have resulted, the complaints coming from owners of prior appropriations from streams to which the springs or seepage are tributary.

No changes of any importance have been made in the statutes pertaining to the filing of claims to water since the law of 1911, except that no fees are required for filing amended reservoir claims where no additional water is appropriated.

Under a ruling of the Attorney General several claims were filed without fees, where the claimant was a municipality or a political subdivision of the state or counties.

RESERVOIR PLANS

During the biennial period plans and specifications for the construction or repair of the following reservoir dams were approved and filed in this office:

Seventeen Reservoir, formerly called Rock Ranch Reservoir, Water District No. 64, J. E. Youngquist, Engineer.

Buffalo Arroya Dam (repairs), Water District No. 18, Clair V. Mann, Engineer.

Apishapa Reservoir Dam (revised plans and specifications), Apishapa Consolidated Reservoir and Irrigation Company, Water District No. 18, Clair V. Mann, Engineer.

Milton Lake Outlet (repairs), Farmers Reservoir and Irrigation Company, Water District No. 2, John E. Hayes, Engineer.

Model Reservoir Dam (repairs), Water District No. 19, Model Land and Irrigation Company, M. E. Bunger, Engineer.

South Side Reservoir, Water District No. 4, South Side Reservoir and Irrigation Company, L. L. Stimson, Engineer.

Klug Reservoir No. 3, Water District No. 2, L. L. Stimson, Engineer.

Hermosa Valley Reservoir, Water District No. 19, George S. Russell, Engineer.

Stanley Lake Dam (repairs), Water District No. 7, Farmers Reservoir and Irrigation Company, John E. Hayes, Engineer.

Marshall Lake Dam (repairs), Water District No. 6, Farmers Reservoir and Irrigation Company, John E. Hayes, Engineer.

Groundhog Reservoir, Water District No. 69, Montezuma Valley Irrigation Company, Ritter & Kroeger, Engineers.

Hay Press Park Reservoir, Water District No. 20, Carl A. Gould, Engineer.

Northfield Land and Water Company, Reservoir No. 5, Water District No. 10, R. M. Reid, Engineer.

Brush Hollow Dam, Beaver Park Company, Water District No. 12, H. P. McKean, Engineer.

Road Canon Reservoir No. 2, Water District No. 20, Norman G. Corson, Engineer.

SUPPLEMENTAL STATEMENTS

In the Twentieth Biennial Report of the State Engineer (for 1919-1920) on pages 9-10, appears a short discussion of the so-called Supplemental Statement Law enacted by the 22nd General Assembly (S. L. 1919, Ch. 147, p. 487).

This law provided that all claims for water filed in the office of the State Engineer and not decreed by the courts, should be considered as void and so noted upon the records, unless a supplemental statement showing that due diligence had been used in constructing the project and putting the water to beneficial use, had been filed with the State Engineer prior to January 1, 1921. (This time was later extended to January 1, 1922, by the 23rd General Assembly.)

These Supplemental Statements constitute a file of "live" or pending claims, to be certified to the court, by the State Engineer, when an adjudication proceeding is had.

During the last period adjudications were held or are pending in Districts Nos. 2, 18, 23, 51, 52, and lists of claims in these districts were certified by the State Engineer to the proper courts.

This so-called supplemental statement law has brought to light many cases of claimants failing to protect their rights by filing maps and statements or having their appropriations adjudicated by the courts at the proper time.

Several maps and statements have been filed since the enacting of this statute representing appropriations initiated in the late sixties and which have been in almost constant use since their inception.

This law has been of real value in educating the general public to the importance of protecting their titles to appropriations of water.

Few, however, seem to be aware of that section of this law which requires that all transfers of title to unadjudicated claims be made of record in this office.

If such transfer is recorded, then the grantee will receive notice at the proper time to present his claim for adjudication, and the danger of having his right canceled by not appearing in court will be avoided.

ENGINEERS' LICENSE LAW

The State Engineer is ex-officio Secretary-Treasurer of the State Board of Examiners for Engineers and Land Surveyors as provided in the so-called engineers' license law. A good deal of office and clerical labor has been performed in this connection, but as a separate report is to be made by the Board no detailed account of these activities is here given.

CHAPTER II

INTERSTATE PROBLEMS

Four years ago in our biennial report we made the following statement: "The rights of various claimants on interstate streams should and doubtless will be settled by compact between the states with the consent of Congress as permitted by the Constitution of the United States." It is gratifying to be able to write that in so short a time a compact has been written and signed by the Commissioners of the seven states within the Colorado River Basin and another between Colorado and New Mexico.

Negotiations are now in progress leading to a similar compact between Colorado and Nebraska. It is also a gratification to write that our own Commissioner, Hon. Delph E. Carpenter, was a leading spirit in this great movement, he having drawn the bills providing for the various State Commissioners and also the original working draft of the compacts.

This move marks a new era in the administration of the rivers of the United States. It substitutes a common sense method of doing business among partners instead of resorting to fruitless and exasperating wrangles in the courts. In no case where resort was had to the courts, in the settlement of interstate water suits, has the result been satisfactory to either side. To those who think the plan impractical we cite the agreement for the distribution of the waters of the Murray River in Australia. The signatories to that agreement were the states of New South Wales, Victoria, South Australia and the Dominion Government. This compact was signed some eight years ago. The situation is quite similar to that on the Colorado River. The water all comes from the states of New South Wales and Victoria but South Australia shares in the water. A regulating dam similar to the one at Boulder Canyon is nearing completion and the agreement seems to be working without a hitch.

It is hoped that the legislature of each state will have the good sense to ratify the compact. To quote from an editorial of the Engineering News-Record, "Obstruction on the part of any one state can only hold back progress to the detriment of that state as well as its neighbors."

Following is the Colorado River compact and also the La Plata River compact between Colorado and New Mexico:

COLORADO RIVER COMPACT.

The States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming, having resolved to enter into a compact under the Act of the Congress of the United States of

America approved August 19, 1921 (42 Statutes at Large, page 171) and the Acts of the Legislatures of the said States, have through their Governors appointed as their Commissioners:

W. S. Norviel, for the State of Arizona;
W. F. McClure, for the State of California;
Delph E. Carpenter, for the State of Colorado;
J. G. Scrugham, for the State of Nevada;
Stephen B. Davis, Jr., for the State of New Mexico;
R. E. Caldwell, for the State of Utah;
Frank C. Emerson, for the State of Wyoming;

who, after negotiations participated in by Herbert Hoover appointed by the President as the representative of the United States of America, have agreed upon the following articles:

ARTICLE I.

The major purposes of this compact are to provide for the equitable division and apportionment of the use of the waters of the Colorado River System; to establish the relative importance of different beneficial uses of water; to promote interstate comity; to remove causes of present and future controversies; and to secure the expeditious agricultural and industrial development of the Colorado River Basin, the storage of its waters and the protection of life and property from floods. To these ends the Colorado River Basin is divided into two basins, and an apportionment of the use of part of the water of the Colorado River System is made to each of them with the provision that further equitable apportionments may be made.

ARTICLE II.

As used in this compact:—

(a) The term "Colorado River System" means that portion of the Colorado River and its tributaries within the United States of America.

(b) The term "Colorado River Basin" means all of the drainage area of the Colorado River System and all other territory within the United States of America to which the waters of the Colorado River System shall be beneficially applied.

(c) The term "States of the Upper Division" means the States of Colorado, New Mexico, Utah and Wyoming.

(d) The term "States of the Lower Division" means the States of Arizona, California and Nevada.

(e) The term "Lee Ferry" means a point in the main stream of the Colorado River one mile below the mouth of the Paria River.

(f) The term "Upper Basin" means those parts of the States of Arizona, Colorado, New Mexico, Utah and Wyoming within and from which waters naturally drain into the Colorado River System above Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System above Lee Ferry.

(g) The term "Lower Basin" means those parts of the States of Arizona, California, Nevada, New Mexico and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are now or shall hereafter be beneficially served by waters diverted from the System below Lee Ferry.

(h) The term "Domestic Use" shall include the use of water for household, stock, municipal, mining, milling, industrial and other like purposes, but shall exclude the generation of electrical power.

ARTICLE III.

(a) There is hereby apportioned from the Colorado River System in perpetuity to the Upper Basin and to the Lower Basin respectively the exclusive beneficial consumptive use of 7,500.000 acre-feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist.

(b) In addition to the apportionment in paragraph (a), the Lower Basin is hereby given the right to increase its beneficial consumptive use of such waters by one million acre-feet per annum.

(c) If, as a matter of international comity, the United States of America shall hereafter recognize in the United States of Mexico any right to the use of any waters of the Colorado River System, such waters shall be supplied first from the waters which are surplus over and above the aggregate of the quantitites specified in paragraphs (a) and (b); and if such surplus shall prove insufficient for this purpose, then, the burden of such deficiency shall be equally borne by the Upper Basin and the Lower Basin, and whenever necessary the States of the Upper Division shall deliver at Lee Ferry water to supply one-half of the deficiency so recognized in addition to that provided in paragraph (d).

(d) The States of the Upper Division will not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre feet for any period of ten consecutive years reckoned in continuing progressive series beginning with the first day of October next succeeding the ratification of this compact.

(e) The States of the Upper Division shall not withhold water, and the States of the Lower Division shall not require the delivery of water, which cannot reasonably be applied to domestic and agricultural uses.

(f) Further equitable apportionment of the beneficial use of the waters of the Colorado River System unapportioned by paragraphs (a), (b) and (c) may be made in the manner provided in paragraph (g) at any time after October first, 1963, if and when either Basin shall have reached its total beneficial consumptive use as set out in paragraphs (a) and (b).

(g) In the event of a desire for a further apportionment as provided in paragraph (f) any two signatory states, acting through their Governors, may give joint notice of such desire to the Governors of the other signatory states and to the President of the United States of America, and it shall be the duty of the Governors of the signatory states and of the President of the United States of America forthwith to appoint representatives, whose duty it shall be to divide and apportion equitably between the Upper Basin and Lower Basin the beneficial use of the unapportioned water of the Colorado River System as mentioned in paragraph (f), subject to the legislative ratification of the signatory states and the Congress of the United States of America.

ARTICLE IV

(a) Inasmuch as the Colorado River has ceased to be navigable for commerce and the reservation of its waters for navigation would seriously limit the development of its Basin, the use of its water for purposes of navigation shall be subservient to the uses of such waters for domestic, agricultural and power purposes. If the Congress shall not consent to this paragraph, the other provisions of this compact shall nevertheless remain binding.

(b) Subject to the provisions of this compact, water of the Colorado River System may be impounded and used for the generation of electrical power, but such impounding and use shall be subservient to the use and consumption of such water for agricultural and domestic purposes and shall not interfere with or prevent use for such dominant purposes.

(c) The provisions of this article shall not apply to or interfere with the regulation and control by any state within its boundaries of the appropriation, use and distribution of water.

ARTICLE V

The chief official of each signatory state charged with the administration of water rights, together with the Director of the United States Reclamation Service and the Director of the United States Geological Survey shall co-operate, ex-officio:

(a) To promote the systematic determination and co-ordination of the facts as to flow, appropriation, consumption and use of water in the Colorado River Basin, and the interchange of available information in such matters.

(b) To secure the ascertainment and publication of the annual flow of the Colorado River at Lee Ferry.

(c) To perform such other duties as may be assigned by mutual consent of the signatories from time to time.

ARTICLE VI

Should any claim or controversy arise between any two or more of the signatory states: (a) With respect to the waters of the Colorado River System not covered by the terms of this compact; (b) over the meaning or performance of any of the terms of this compact; (c) as to the allocation of the burdens incident to the performance of any article of this compact or the delivery of waters as herein provided; (d) as to the construction or operation of works within the Colorado River Basin to be situated in two or more states, or to be constructed in one state for the benefit of another state; or (e) as to the diversion of water in one state for the benefit of another state; the Governors of the states affected, upon the request of one of them, shall forthwith appoint Commissioners with power to consider and adjust such claim or controversy, subject to ratification by the Legislatures of the states so affected.

Nothing herein contained shall provent the adjustment of any such claim or controversy by any present method or by direct future legislative action of the interested states.

ARTICLE VII

Nothing in this compact shall be construed as affecting the obligations of the United States of America to Indian Tribes.

ARTICLE VIII

Present perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact. Whenever storage capacity of 5,000,000 acre feet shall have been provided on the main Colorado River within or for the benefit of the Lower Basin, then claims of such rights, if any, by appropriators or users of water in the Lower Basin against appropriators or users of water in the Upper Basin shall attach to and be satisfied from water that may be stored not in conflict with Article III.

All other rights to beneficial use of waters of the Colorado River System shall be satisfied solely from the water apportioned to that Basin in which they are situate.

ARTICLE IX

Nothing in this compact shall be construed to limit or prevent any state from instituting or maintaining any action or proceeding, legal or equitable, for the protection of any right under this compact or the enforcement of any of its provisions.

ARTICLE X

This compact may be terminated at any time by the unanimous agreement of the signatory states. In the event of such termination all rights established under it shall continue unimpaired.

ARTICLE XI

This compact shall become binding and obligatory when it shall have been approved by the Legislatures of each of the signatory states and by the Congress of the United States. Notice of approval by the Legislatures shall be given by the Governor of each signatory state to the Governors of the other signatory states and to the President of the United States, and the President of the United States is requested to give notice to the Governors of the signatory states of approval by the Congress of the United States.

IN WITNESS WHEREOF, the Commissioners have signed this compact in a single original, which shall be deposited in the archives of the Department of State of the United States of America and of which a duly certified copy shall be forwarded to the Governor of each of the signatory states."

Then follows the clause dating the execution of the compact at Santa Fe, New Mexico, on November 24th, 1922, with the signatures of the seven State Commissioners, and with the signature of Herbert Hoover following the word "approved."

LA PLATA RIVER COMPACT

The State of Colorado and the State of New Mexico, desiring to provide for the equitable distribution of the waters of the La Plata River and to remove all causes of present and future controversy between them with respect thereto and being moved by considerations of interstate comity, pursuant to Acts of their respective Legislatures, have resolved to conclude a compact for these purposes and have named as their Commissioners:

Delph E. Carpenter, for the State of Colorado, and Stephen B. Davis, Jr., for the State of New Mexico; who have agreed upon the following articles:

ARTICLE I

The State of Colorado, at its own expense, shall establish and maintain two permanent stream-gaging stations upon the La Plata River for the purpose of measuring and recording its flow, which shall be known as the Hesperus Station and the Interstate Station, respectively.

The Hesperus Station shall be located at some convenient place near the village of Hesperus, Colorado. Suitable devices for ascertaining and recording the volume of all diversions from the river above Hesperus Station, shall be established and maintained (without expense to the State of New Mexico), and whenever in this compact reference is made to the flow of the river at Hesperus Station, it shall be construed to include the amount of the concurrent diversions above said Station.

The Interstate Station shall be located at some convenient place within one mile of, and above or below, the interstate line. Suitable devices for ascertaining and recording the volume of water diverted by the Enterprise and Pioneer Canals, now serving approximately equal areas in both states, shall be established and maintained (without expense to the State of New Mexico), and whenever in this compact reference is made to the flow of the river at the Interstate Station, it shall be construed to include one-half the volume of the concurrent diversions by such canals, and also the volume of any other water which may hereafter be diverted from said river in Colorado for use in New Mexico.

Each of said stations shall be equipped with suitable devices for recording the flow of water in said river at all times between the 15th day of February and the 1st day of December of each year. The State Engineers of the signatory states shall make provision for co-operative gaging at the two stations, for the details of the operation, exchange of records and data, and publication of the facts.

ARTICLE II

The waters of the La Plata River are hereby equitably apportioned between the signatory states, including the citizens thereof, as follows:

1. At all times between the 1st day of December and the 15th day of the succeeding February, each State shall have the unrestricted right to the use of all water which may flow within its boundaries.

2. By reason of the usual annual rise and fall, the flow of said river between the 15th day of February and the 1st day of December of each year, shall be apportioned between the states in the following manner:

(a) Each state shall have the unrestricted right to use all the waters within its boundaries on each day when the mean daily flow at the Interstate Station is one hundred cubic feet per second, or more.

(b) On all other days the State of Colorado shall deliver at the Interstate Station a quantity of water equivalent to one-half of the mean flow at the Hesperus Station for the preceding day, but not to exceed one hundred cubic feet per second.

(3) Whenever the flow of the river is so low that in the judgment of the State Engineers of the States, the greatest beneficial use of its waters may be secured by distributing all of its waters successively to the lands in each state in alternating periods, in lieu of delivery of water as provided in the second paragraph of this Article, the use of the waters may be so rotated between the two states in such manner, for such periods, and to continue for such time as the State Engineers may jointly determine.

(4) The State of New Mexico shall not at any time be entitled to receive nor shall the State of Colorado be required to deliver any water not then necessary for beneficial use in the State of New Mexico.

(5) A substantial delivery of water under the terms of this Article shall be deemed a compliance with its provisions and minor and compensating irregularities in flow or delivery shall be disregarded.

ARTICLE III

The State Engineers of the states by agreements, from time to time, may formulate rules and regulations for carrying out the provisions of this compact, which, when signed and promulgated by them, shall be binding until amended by agreement between them or until terminated by written notice from one to the other.

ARTICLE IV

Whenever any official of either state is designated to perform any duty under this compact, such designation shall be interpreted to include the state official or officials upon whom the duties now performed by such official may hereafter devolve.

ARTICLE V

The physical and other conditions peculiar to the La Plata River and the territory drained and served thereby constitute the basis for this compact, and neither of the signatory states concedes the establishment of any general principle or precedent by the concluding of this compact.

ARTICLE VI

This compact may be modified or terminated at any time by mutual consent of the signatory states and upon such termination all rights then established hereunder shall continue unimpaired.

ARTICLE VII

This compact shall become operative when approved by the Legislature of each of the signatory states and by the Congress of the United States. Notice of approval by the Legislature shall be given by the Governors of each state to the Governor of the other state and the President of the United States is requested to give notice to the Governors of the signatory states of approval by the Congress of the United States.

IN WITNESS WHEREOF, the Commissioners have signed this compact in duplicate originals, one of which shall be deposited with the Secretary of State of each of the signatory states.

Done at the City of Santa Fe, in the State of New Mexico, this twenty-seventh day of November, in the year of Our Lord, One Thousand Nine Hundred Twenty-two.

(Signed) DELPH E. CARPENTER,
STEPHEN B. DAVIS, JR.

In contrast to the foregoing compacts, which when ratified by the Legislatures of the signatory states and approved by Congress, will amicably settle various interstate water controversies, we have the decisions of the United States Supreme Court in the Kansas-Colorado case and in the case of Wyoming v. Colorado.

The Kansas-Colorado decision was handed down in May, 1907, and in August, 1910, another suit was brought by certain Kansas ditches against a number of Colorado defendants. After several years of expensive litigation this suit was "settled" by a contract involving a large cash payment by the defendants. This contract was signed in February, 1916.

In November, 1916, still another suit was brought by a Kansas ditch against the same Colorado defendants, and this suit is still pending and will probably be fought out in the courts in the near future.

A summary of the decision of the Supreme Court in the case of Wyoming v. Colorado follows. This decision may be considered as a victory for Wyoming, but if so it is a hollow one for while Wyoming may apparently gain on one small stream she loses on several other larger ones. The decision is manifestly unsatisfactory to Colorado, and hence while it may settle the controversy over the waters of the Laramie river, the settlement is not satisfactory to either state.

1. Wyoming v. Colorado.

On June 5th, 1922, the long expected decision in the case of Wyoming v. Colorado was handed down by the Supreme Court of the United States.

This case involved the diversion of a part of the waters of the Laramie River (an interstate stream rising in Colorado and flowing thence into Wyoming) by means of diversion ditches near the headwaters, through the Laramie-Poudre tunnel, into the Poudre river for use in the Greeley-Poudre Irrigation District.

The opinion of the Supreme Court may be briefly summarized as follows:

The diversion complained of is a diversion to a different watershed, to develop new land.

No question of "priority" versus "riparian rights" is raised, but in allocating the waters of the stream between the two states, the fundamental principle of protection of existing beneficial uses is applied to the extent of first providing water for existing appropriations in each state.

The contention of Colorado, that she may use all of the water which originates within her boundaries, is untenable.

The contention of Wyoming that Colorado may not divert the waters of the Laramie to another watershed is also untenable. In neither state does the right of appropriation depend upon the place of use being in the same watershed. Such diversions, from one watershed to another, are made in both states and recognized by the Courts.

The cardinal rule of the doctrine of appropriation within each state is that priority of appropriation gives superiority of right. The principle on which it proceeds is not less applicable to interstate streams and controversies than to others.

But quoting from the Supreme Court opinion:

"Both states recognize that conservation within practicable limits is essential in order that needless waste may be prevented and the largest feasible use may be secured. This comports with the all-prevailing spirit of the doctrine of appropriation and takes appropriate heed of the natural necessities out of which it arose. We think that doctrine lays on each of these states a duty to exercise her right reasonably and in a manner calculated to conserve the common supply."

The natural flow of the Laramie river at Woods, which is after the recognized Colorado appropriations are satisfied, is susceptible by means of practicable storage and conservation of being converted into a fairly constant and dependable flow of 170,000 acre-feet per year.

The recognized prior appropriations in Colorado are 18,000 acre-feet for the Sky Line ditch and 4,250 acre-feet for the ditches in the Laramie valley in Colorado.

In the computation of the water available for Wyoming from the Laramie river, only two tributary streams are considered, the Little Laramie, which it is estimated will furnish 93,000 acre-feet per year and Sybille Creek, which is estimated at 25,000 acre-feet per year. These amounts, together with the 170,000 acre-feet in the main river at Woods, furnish a total flow of 288,000 acre-feet per year, available for use in Wyoming.

The Court finds that Wyoming appropriations senior to Colorado, dependent upon that supply, cover 181,500 acres of land and that the total amount set aside for such appropriations is 272,500 acre-feet. No explanation of how this conclusion was reached is given.

The total supply, 288,000 acre-feet, minus the Wyoming appropriations, 272,500 acre-feet, leaves 15,500 acre-feet which the Court allocates to the Greeley-Poudre District, going on to say:

"A decree will accordingly be entered enjoining the defendants from diverting or taking more than 15,500 acre-feet per year from the Laramie river by means of or through the so-called Laramie-Poudre project.

It is interesting to note that in arriving at the dates of appropriations in the two states, the decree of the District Court of Larimer County is set aside and a new date seven years later is given to the Greeley-Poudre project.

The District Court decree gave to this priority the date of August 25th, 1902, and under this decree the tunnel has been operating and diverting water since 1914. The Supreme Court establishes a new date of priority, viz: October, 1909, thereby making the new priority seven years the junior of the one originally decreed. This permitted several large reservoir projects in Wyoming, begun in 1906-8, to be awarded a superior water supply to that given to the Greeley-Poudre enterprise, upon which $800,000 had been expended between 1902 and 1909.

CHAPTER III

IRRIGATION DISTRICTS

The Legislature of 1921 passed a new law pertaining to the organization, management and dissolution of irrigation districts (Session Laws 1921, Chap. 160, p. 517) the essential points of which are as follows:

1. The creation of a State Irrigation District Commission, which shall consist of the Attorney General, the Bank Commissioner and the State Engineer, and who shall report upon any proposed irrigation district, as to:

(a) Water supply.

(b) Soil.

(c) Feasibility of the proposed system of irrigation including costs of construction or acquisition.

(d) Value of lands within the district (1) in present condition, and (2) after irrigation under the system proposed, when completed and in operation.

(e) Indebtedness of the district, present and proposed.

(f) Bonds of the district, if any, described by numbers, denominations and issues, present and prospective, certified by the commission as legal investments for trust funds or state moneys.

2. Providing for the manner of procedure in the formation or dissolution of irrigation districts.

3. Providing for the issuance of bonds, warrants, etc.

4. Providing a method whereby a district organized under the old irrigation district law may come under the new act.

The fundamental idea of the new law seems to be to create a sort of state control and regulation which shall prevent the flotation of any more "wild cat" schemes.

It is well known that for a time Colorado Irrigation District "securities" were sold all over the country and in some cases these bonds represented loans on projects which had an entirely inadequate water supply. So many irrigation districts got into financial difficulties that it became practically impossible to market an irrigation district bond issue. Consequently there sprung up a demand for some kind of state control of all projects from their inception to their completion.

The new law gives the Irrigation District Commission almost absolute control of the districts' operations as to issuance of bonds, letting of contracts, employment of engineers, character of advertisements, etc.

In view of past history it seems entirely proper that there should be some state supervision of irrigation districts but state officials are not infallible. If good judgment is not used development might be retarded by this new law.

It is quite true that the building of irrigation works has been in advance of the demand, and much of the loss is due to that fact. A number of our districts came to grief through inability to colonize the lands. From now on, however, there is not much likelihood of promotion going much beyond demand. The fact that there is a state commission to review and supervise the work of the promoters will have a wholesome effect on the business, provided said commission uses good judgment and common sense.

Since the passage of the 1921 law two projects have been reported upon by the Irrigation District Commission. The first of these was the Del Norte Irrigation District. This was an entirely new project which contemplated the formation of an Irrigation District and the bonding of 10,000 acres of land near Del Norte, Colorado, for the purpose of raising about $350,000.

With this money a reservoir was to be constructed on the headwaters of the North Fork of Clear Creek (a tributary of the Rio Grande) and a ditch and irrigation system for the irrigation of the 10,000 acres of land near Del Norte.

The Irrigation District Commission reported favorably upon this district as to feasibility, cost, water supply, etc., and the bonds were advertised for sale. Unfortunately few bidders were found and none who could offer a reasonable price for the bond issue. Since the district did not feel like taking a 15 to 20% discount on the bonds, these offers were not accepted and no bonds have been sold.

The Del Norte Irrigation District is an excellent project and is bound to succeed ultimately, but it needs financial backing by some one interested in its final success rather than in a big commission on the sale of its bonds.

The second project to be considered by the Irrigation District Commission was the Trinchera District, also located in the San Luis Valley, near the towns of Ft. Garland and Blanca.

This is an old district which has voted to come under the new law, and to issue bonds to finance certain enlargements and improvements of an already existing irrigation system.

The enlargements and improvements proposed consist of diversion ditches from Ute Creek and Indian Creek to the Mountain Home reservoir now supplied from Trinchera Creek, the enlarging of the Smith Reservoir by raising the dam, the cleaning and repairing of the various ditches of the system, and the drainage of some 9,000 acres of seeped land in the district.

The present bond issue of the district is about $650,000, which it is proposed to enlarge to $1,000,000.

The acreage to be included in the Trinchera District will be about 50,000 acres.

The Irrigation District Commission reported favorably upon this project and at this time it is thought that its affairs are progressing favorably, though as yet no bids have been asked on the bonds.

A third district known as the Maybell Irrigation District in Moffat County is in process of formation. The object of the organization is to take over the Maybell Canal Company's system, which has been in successful operation for about sixteen years and covers 4,000 acres. It is intended to issue $80,000 in bonds, $60,000 of which will be used in the purchase of the system and $20,000 for expenses of organization and improvements. The State Engineer has made his preliminary report to the County Commissioners and an election has been called for voting upon the organization.

REGULATIONS FOR PREPARATION OF MAPS OF IRRIGATION DISTRICTS UNDER AN ACT CONCERNING ORGANIZATION, MANAGEMENT AND DISSOLUTION OF IRRIGATION DISTRICTS: SESSION LAWS 1921, CHAPTER 160, PAGE 517.

All maps and plans must be prepared under the same rules as are required by the State Engineer for filing claims to water rights, viz: Maps must be on good quality of tracing cloth, 24x36 inches, with a two-inch margin on the left end, and one-half inch on other three sides, making the available space for the map 23x33½ inches. All maps must be made of this size irrespective of the size of the reservoir or the ditch to be shown. Trim all sheets to 24x36, or same will be returned.

The scale of the map may vary, but should be sufficient to clearly show each course and distance. It is desirable in the case of reservoirs that the scale should be four hundred feet to the inch, or larger when needed to properly show the proposed works. In case the sheet is not of sufficient size for this purpose, the map may consist of two or more sheets. In such case, each sheet should be marked "Sheet No. 1 of ...... sheets," "Sheet No. 2 of ...... sheets," etc., and each sheet should have the same general title.

All maps should have the proper title and when necessary explanatory legend, and signed by the engineer of the district.

Approved April 17th, 1922.

CHAPTER IV

FLOODS OF 1921 AND 1922

ARKANSAS RIVER FLOOD

On the night of June 3rd, 1921, occurred the worst flood in the history of the state. A series of cloudbursts in the comparatively small drainage area tributary to the Arkansas River between Pueblo, Colorado Springs and Canon City caused an enormous flow of water in the Arkansas, the Fountain and the St. Charles rivers and in all of the tributary streams between Canon City and the east line of Pueblo County.

At Pueblo the Arkansas River broke the levees, overflowed its channel and inundated nearly the whole of the business district causing an enormous property loss and a great loss of life.

It is not the purpose of this brief article to describe the flood, particularly since this has been ably done in other publications. See

Transactions American Society of Civil Engineers, Vol. LXXXV, p. 1 (1922).

The Flood of June , 1921, in the Arkansas River at Pueblo, Colorado, by James Munn and J. L. Savage (Engineers U. S. R. S.), with discussion by Messrs. Arthur O. Ridgway, R. G. Hosea, George G. Anderson, Robert Follansbee and E. E. Jones.

See also

U. S. G. S. Water Supply Paper No. 487.

The Arkansas River Flood of June 3-5, 1921, by Robert Follansbee and Edward E. Jones.

In a report of the work of this department, however, a few words as to its activities during and after the flood may be pertinent.

On June 3, 1921, the State Engineer's Office was represented in Pueblo by Mr. C. W. Beach, Division Engineer, and Messrs. H. D. Asmley and G. C. Price, hydrographers.

On June 2nd, a careful current-meter measurement of the Arkansas River was made at Pueblo by Messrs. Amsley and Price. On June 3rd these men made an approximate float measurement of the river at the same place, timing logs and drift over a measured distance with stop watches. This measurement was made at 6:00 p. m. and in twenty minutes the river rose a foot. (From gage 10.6 to 11.6.)

Another current meter measurement was made on June 7th after the flood had subsided, and these three measurements formed the basis from which the most accurate and valuable estimates as to the peak flow and volume of the flood were computed.

At about 8:30 p. m. on the evening of June 3rd, the river overtopped the channel through Pueblo. Mr. Price was at the Union Avenue bridge at the time, while Mr. Beach and Mr. Amsley were in the office, on the fourth floor of the Central Block. They were warned by Price from below and scrambling down four flights of stairs, in the dark, they made their way to safety through water up to the running boards of their car.

Mr. Price was one of those who went to Mineral Palace Park, got boats and bravely assisted in rescuing people marooned on house tops and telephone poles by the rushing waters, which in many places were ten and twelve feet deep.

In the ensuing days of chaos Mr. Amsley rendered invaluable service, collecting data of gage heighths, high water marks and information of all kinds on which we were able later to base an estimate of peak flow and volume of the flood, which withstood the test of scientific investigation by both the U. S. Geological Survey and the Dayton-Morgan Engineering Company, both of which organizations checked our figures very closely.

In a few days, when communication between Pueblo and the outside world was established, Mr. R. G. Hosea, Deputy State Engineer, went to Pueblo and with Mr. Amsley, the U. S. Reclamation Service Engineers, and various local committees made a trip of inspection of the Arkansas Valley from Canon City to La Junta, and still later this inspection was continued as far east as Dodge City, Kansas.

Various "slope-area" stations were measured by Messrs. Amsley and Price and served to approximate the flows of the several side streams below Pueblo and of the main Arkansas River at La Junta.

The flood washed out nearly all ditches below Pueblo, changed the channel of the river in various places, washed out gages and ruined measuring stations, so that the rest of the summer was put in restoring order from chaos and re-establishing some degree of system in the distribution of water in the Arkansas Valley.

THE FLOOD IN THE SOUTH PLATTE RIVER—JUNE, 1921

W. T. Blight, Hydrographer Division No. 1

Beginning on June 3rd heavy rains began falling over many parts of Colorado and as a result many of the streams overflowed their banks and caused a great deal of damage to all kinds of property. Perhaps, next to the Arkansas, the flood which caused so much damage to the city of Pueblo, the South Platte River carried more water than any other stream in the state except the Colorado. These rains continued in a general way for a period of several days, however, in most localities, the heavier part occurred during the period of June 3 to 6, inclusive.

A study of the U. S. Weather Bureau precipitation records for stations scattered throughout the drainage area of the South Platte helps to locate the source of much of this flood water. For South Park these records show an average daily rainfall of .39 inches at Hartsel and .97 inches at Lake Cheesman from June 3 to 6, inclusive. At Morrison, on Bear Creek, the daily rainfall was 1.10 inches during the same period. At Idaho Springs, on Clear Creek, the average was .57 inches. The daily average at Eldorado Springs was .70 inches, and at Boulder .66 inches. Near Long's Peak, on the headwaters of the St. Vrain, the average was .79 inches, and at Longmont 1.44 inches. Above Estes Park the daily average was .51 inches. At Fort Collins .70 inches was recorded each day for this period. At Denver and Fort Lupton the daily average was .67 inches, while at Greeley it dropped to .46 inches and gradually became less until only .05 inches was recorded at Julesburg. Thus it appears that the entire drainage area to the south and west, and to a point about 50 miles northeast of Denver, experienced an almost continuous rain for a period of four days.

A statement concerning the stage of the river and its tributaries just prior to the flood period might be of interest at this point. The discharge records of the State Engineer's office show that all the important streams entering the river were carrying much more than a normal flow. In several of the small creeks emptying into the river there had been floods of considerable size, but of short duration just previous to the time of the flood in the main stream, i. e.—Wildcat Creek at Dodd Siding and Pawnee Creek near Sterling. In the river itself for a short period before the flood the records show an average daily flow of 1325 second-feet at Denver, 850 at Kersey, 660 at Balzac, and about 125 second-feet at Julesburg.

The above statements show that except on the extreme lower section of the river, the majority of the holes and sand bars were fairly well filled and saturated before the flood occurred, with the result that the flood did not flatten out much before it reached the state line. This statement is further proven in a later paragraph on the maximum daily flow at various points.

The following tabulation of velocities at the points where actual meter measurements were made by the writer, shows that due to underbrush, etc., the water traveled very slowly, especially on the lower sections of the river.

	——Velocity——		
Station	Ft. per Sec.	Miles per Hour	Channel
Denver	7.12	4.85	Restricted and clean.
Kersey	4.39	2.99	Overflow and wooded.
Fort Morgan	4.16	2.83	Overflow and wooded.
Balzac	3.81	2.60	Overflow and wooded.
Sterling	4.18	2.85	Partly restricted and lightly wooded.
Julesburg	2.60	1.77	Overflow and wooded.

Daily gage height records for various points along the river show that the average hourly velocity between Denver and Kersey was 3.42 miles, between Kersey and Balzac 2.33 miles, and between Balzac and Julesburg 1.70 miles.

The daily discharge records in the State Engineer's office show the maximum daily flow at Denver to have been 8790 second-feet on June 8th, 31000 second-feet at Kersey on June 7th, 31200 second-feet at Balzac on June 11th, and 30800 second-feet at Julesburg on June 16th. The apparent discrepancy in dates between the maximum flow at Denver and Kersey is explained by the large inflow below Denver from the St. Vrain, Clear Creek and Big Thompson on dates prior to the maximum flow at Denver.

As the result of such a large quantity of water flowing through a channel restricted in many places by bridges and earth fills, and also covered by a growth of bushes and trees, damage to various kinds of property in close proximity to the river is only natural. Unlike a flood traveling rapidly, the loss of life was not great and only two were lost, to the knowledge of the writer, as a direct result of the flood. One death occurred at Denver in an accidental way and one at Union, Colorado, when a C., B. & Q. R. R. passenger train was crossing the river at that station. The bridge settled, allowing the engine and baggage car to go into the river, and the fireman, a resident of Sterling, was drowned.

The loss to growing crops as a result of inundation and washing would be very hard to ascertain and, perhaps, at the very best would be only an approximation, so it is not included in the following tabulation of losses. There also was a loss to many farmers in the way of livestock, poultry, etc., but it likewise would be hard to ascertain. Losses to irrigation systems diverting from the river were quite heavy and worked a double hardship on the water users in the following way: First their crops were damaged (if close to the river) by inundation and a deposit of sand and silt; then because of lack of water, due to inability to get water through damaged diversion works. Secondly, they were face to face with an additional levy or assessment to pay for the repair work. The flood caused heavy damage to the headworks and diversion dams of three of the largest systems along the river, but ones which had already been contemplating reconstruction, and as a result their decision to rebuild was only hastened and it is rather doubtful if these damages should be considered as a direct loss. They spent about $50,000 in permanent steel and concrete improvements. Perhaps the greatest loss along the river occurred to the Prewitt system, which lost its entire diversion works, and from an early estimate has spent about $40,000 to build the present headworks and dam.

For a period of several days the railroads were more or less hampered because of damage to their structures. Early in the flood period the Julesburg branch of the Union Pacific was closed at Masters, due to a trestle over the Jackson Lake Canal washing out with the consequent routings of their trains over the C., B. &

Q. tracks from Union to Denver. Upon the the failure of the river bridge at Union, under the weight of a C., B. & Q. train, all Union Pacific trains were re-routed from Denver to Cheyenne to Julesburg and back to Sterling. There is no data at hand as to the cost to the two railroads of repairing the trestle at Masters and the bridge at Union and raising the locomotive and baggage car from the river at Union.

From data secured from County Engineers, Road Supervisors, Water Commissioners and Ditch Superintendents, the following short tabulation gives a fairly close statement of the larger and main losses due to the flood:

Roads and bridges (7 counties)	$ 80,000
Irrigation Systems (4 water dists.) $50,000 of which was contemplated	152,000
Total	$232,000

When the large territory over which the above losses were scattered, and the small number of fatalities is considered as the result of this flood, it would hardly be possible to consider it as a disastrous event and only a happening which might occur fairly often and soon be forgotten. Much consolation may be derived by the public in general who have paid for the repairs, in the fact that the replaced bridges and irrigation structures are of a much better type and that they will serve their purpose in a better may than the old ones could ever have served.

CHERRY CREEK FLOOD

JULY 28, 1922

The flood of July 28, 1922, was caused by heavy rain and hail over the area starting two miles north of Parker or near the township line of Townships 5 and 6 South, and extending to Franktown, or approximately the township line between Townships 7 and 8 South.

The rain extended over an area of approximately 87 square miles and varied in intensity from 1 inch to 3.5 or 4 inches. The duration of the rain was from 2:00 p. m. to 4:00 p. m. The time of excessive rainfall and hail varied from 30 minutes to 45 minutes.

About three miles north of Parker the rainfall was estimated at one-half inch. Mr. A. W. Payne, located in Section 3, Township 75, Range 66 W., estimated the rainfall as a little better than two inches from amount of water collected in a wash tub and boiler in the yard.

The editor of the paper at Parker informed us that the area of heaviest rainfall was in Bayou Gulch, located about six miles south of Parker.

Mrs. Boegle, located on Bayou Gulch about four miles above the junction of Cherry Creek and Bayou Gulch, said it was the heaviest flood they had had in forty-eight years that her husband had lived there. The rainfall at this place was about 3½ inches, estimated from water in a wheelbarrow in the yard.

The section taken at the mouth of Bayou Gulch showed that the amount of water was 8700 second-feet.

ELEMENTS OF SLOPE-AREA STATIONS AT MOUTH OF BAYOU GULCH

Sec. 23, T. 7 S., Range 66 W., Section 1—
    Area—850 sq. ft.
    W. P.—428 ft.
    R.—189 ft.
Section 2—
    Area—996 sq. ft.
    W. P.—4.08 s. ft.
    R.—2.04 ft.
Mean—
    Area—923 sq. ft.
    W. P.—4.08 ft.
    R.—2.15 ft.
    V.—.030
    Mean Vel.—9.4 ft.
    Dis.—8670 sec. ft.
    Drainage area—19 sq. miles
    Unit runoff—470 cu. ft. per sec. per sq. mile.

The high water reached the mouth of Bayou Gulch at 3:45 p. m. and the duration was approximately one hour.

The flood reached the line between Townships 5 and 6 at 4:30 o'clock in the afternoon and a second peak about thirty minutes later. At 8:00 o'clock the water was down within its banks and the next morning was down so that it could easily be forded. This flood was a trifle lower than the flood of 1912. The discharge at this point was estimated at 17,000 sec. ft. and the total discharge as 3,900 acre-feet. The discharge was estimated from the following:

Area—2,100 sq. ft. (est.)
R.—3.0 feet.
Slope—.008 from topographic map
Mean Vel.—8.0 feet per sec.
Discharge—17,000 sec. ft.
Drainage area—87 sq. miles
Unit runoff per sq. mi.—195 cu. ft. per sec.

The flood reached the Denver gaging station on the Platte at 7:30 p. m. and reached the peak at approximately 8:00 p. m. The gage height before the flood was 1.5 or approximately 450 sec. ft. of water in the river. The gage height at the peak was

6.1 feet, or 5,850 sec. ft. The amount of water due to Cherry Creek was probably about 5,400 sec. ft. It may be less than this but not more.

The number of acre-feet runoff from Cherry Creek from 7:30 p. m. on the 7th until noon on the 29th was 3,300 acre-feet computed as follows:

Hour	G. H.	Cherry Cr. Dis. Sec. Ft.	Time	Acre-Ft.
7:30 P. M.	1.5	0		
			½ hr.	113
8:00 P. M.	6.1	5,400		
			1 hr.	450
9:00 P. M.	6.1	5,400		
			3 hrs.	1,112
12:00 Midnight	5.0	3,500		
			9 hrs.	1,500
9:00 A. M.	3.2	500		
			3 hrs.	85
12:00 Noon	3.0	200		
				3,261

NOTE—The estimate at 9:00 A. M. is probably high, but will make a small difference on total acre-feet.

CHAPTER V

EARTH DAM FAILURES

The unexpected flood of June, 1921, in the Arkansas and South Platte Rivers elicited much loose talk about the condition of our reservoir dams, and some criticism of this office concerning the matter of supervision.

The newspapers reported dams breaking everywhere when, as a fact, only one reservoir of any consequence broke over the whole flood area where there are about 200 reservoirs. However, this does not minimize the importance of using care in the construction of dams, and in keeping acquainted with their condition as to saturation, etc.

There are about 760 earth reservoir dams in the state, ranging in height from 15 feet to 165 feet, the most of them situated where only earth dams are practicable. While there have been but few total failures, a number of serious breaks and slides have occurred from time to time, due to faulty construction.

It is not the province of this report to enter into discussion of earth dam construction, but it is proper to point the way to the proper safeguarding of the dams already constructed and also to suggest methods of inspection for the future. The inspection suggested in order to keep properly advised as to the rate of saturation is to sink or drive wells at sufficient intervals along the dam and across it. Records of these wells can be kept so that when saturation becomes dangerous something can be done to remedy it.

Mr. A. L. Fellows, Senior Irrigation Engineer, 301 Custom House, Denver, Colorado, is making an exhaustive study of earth dams which will be embodied in a bulletin to be published by the Agricultural Department. This office has been favored with an outline of this bulletin, and it is believed when published it will make a valuable text-book not only on earth dam construction, but especially on the care of them afterwards.

A most interesting case of threatened failure due to supersaturation with which this office has had to deal during this biennial period is that of the Marshall Lake Dam, situated about six miles from Boulder and one mile from the coal town of Marshall, now owned by the Farmers Reservoir and Irrigation Company. Space will not permit a complete history of the dam from its inception. Only an outline can be given.

About 1885 a dam 25 feet in height was built with a 30-inch cast iron outlet pipe laid on the ground with a valve on the outer end. So far as can be determined there were no cut-off walls. This pipe is shown on the insert diagram marked ''A''.

In about 1900 plans were made for an enlargement to 52 feet in height by building up on the lower side of the old dam. The first 10 or 12 feet of this new work was put in by hydraulic process. It was soon found that the material (being mostly fine plastic clay) would not permit of the hydraulic fill process and the work was completed by means of a steam shovel, track and dump cars. The material was dumped loosely into the semi-liquid mass created by the sluicing. The outlet pipe was extended and a new valve put on the lower end. This work was completed in 1907.

Later the present owners took over the property and in 1909 proceeded to raise the dam to a height of 75 feet by widening the base on the lower side. A loose rock drain (marked ''C'' on the diagram) was built into this new work with a tile and rock outlet ''D''. After this work was finished the lake was filled. The water was not in long till a slide occurred on the lower side and the lake was emptied. This slide so damaged the outlet pipe that it was abandoned and a new one was constructed (''B'' on the insert) by running a tunnel 40 feet below the surface where solid shale formation was found. In this tunnel a 48-inch steel pipe was placed, surrounded by concrete with the outlet valve on the lower end. The reservoir was used for several years without any serious mishaps although there was some settlement.

After several years use water began to leak out along the outlet pipe. In 1920 the dike was raised again to 75 feet and the reservoir was filled to 65 feet in the spring of 1921. In June, 1921, a large section of the dam began to gradually settle. A plane of cleavage showed upon the upper face apparently along where the new work joined into the original 25-foot section. This settlement continued for several weeks until a section of two hundred feet or more settled as much as 16 feet. Fortunately the outlet pipe had a large capacity (350 feet per second), so that the water level was kept below the top of the dam as it went down, consequently a catastrophe was averted.

A board of three engineers was called in and it was first decided to repair the dam by building a new prism of selected material and of sufficient dimensions on the water face of the old dam. But on emptying the lake this plan was found to be economically impossible on account of the expense of preparing a proper foundation and the excessive yardage required. So it was decided to reinforce the old dike by a banquette of earth properly placed on the lower side as shown on the insert. While this was being done, or before, a thorough investigation was made of the old and the new outlets, the rock drains and so far as possible the condition of the center of the dam. It was found that the old original outlet ''A'' was standing full of water, it not having been properly stopped off; the new siphon outlet ''B'' had been poorly constructed and was leaking in a number of places; the rock and tile drains were not functioning, being full of water under pres-

PLAN.
SCALE 1" = 100'

TYPICAL TUNNEL SECTION.
OF
PRESENT OUTLET CONDUIT.
SCALE 1" = 3'
C - C

TYPICAL SECTION
OUTLET ROCK DRAIN.
SCALE 1" = 5'
B - B

TYPICAL SECTION
LOOSE ROCK DRAIN
SCALE 1" = 5'
A - A

CROSS-SECTION STA. 7+00
OUTLET STA 8+88
SCALE 1" = 50'

TYPICAL SECTION
OF
DRAINAGE TUNNEL
AT
END OF OLD OUTLET.
SCALE 1" = 3'

PLAN AND CROSS-SECTION OF MARSHALL LAKE DAM.

SHOWING METHOD OF REPAIRS.
FOR
THE FARMERS RESERVOIR AND IRRIGATION CO.
NOV. 27, 1922.

sure. Evidently for all these years the dam was in operation the water was gradually being forced into the dike until it became unstable. This condition in this case did not show at the toe of the dam at all except the little seepage along the new outlet pipe.

In this banquette was put a new loose rock drain marked "E". Also the old outlet pipe "A" was plugged for a distance of 60 feet of the upper end, the lower end was cleaned out and made into a drain which can be entered and examined. The new outlet "B" was torn out and rebuilt in a most thorough manner.

It is believed the dam is now in an absolutely stable condition for use up to 45 feet, and after a good test and the drains are found to be keeping the dike sufficiently free from saturation, it may be safe to carry the dike up and use the reservoir to its maximum capacity, which is about 11,000 acre feet.

The above history shows the importance of keeping advised of the condition of earth dams as to saturation, etc. Earth dams may be built in the most careful manner and with the best of material and still after long use something may go wrong. If the present law does not give this office the power to demand such inspection by the owners such power should be given.

CHAPTER VI

CARRYING RESERVOIR WATER IN RIVER CHANNELS

The 15th Biennial Reort of the State Engineer (1909-1910), Chapter XII, pps. 169-185, contains a discussion of the general proposition of running reservoir water in natural streams and an analysis of a particular run from Antero Reservoir to the Highline Ditch which was made in 1910. A study of this chapter will indicate the difficulties encountered by the Commission appointed to determine the loss in transmission of this water enroute from Antero to the Highline.

The determination of losses in reservoir runs is one problem that the State Eengineer's office must solve, and it is one beset with uncertainties and difficulties. The determination must be made, often over a long stretch of river, usually in the mountains, and at the time of year when rain storms are of daily occurrence, any one of which occurring over the main stream or any tributary, may vitiate the results of the work.

It is for that very reason, the extreme difficulty of obtaining accurate results in loss determinations, that exchange reservoirs continue to operate year after year paying an arbitrary figure of 5% to 10% of the water turned out, as compensation to the river for loss in transmission. It is obvious that if this figure is too low the river loses, and if too high the reservoir loses.

Many attempts have been made to obtain accurate figures on loss in transmission of reservoir water, and too often these determinations have been ruined by rains while the run was in progress.

The run described in the aforesaid report served as a basis upon which some idea of the losses in various stretches of the upper South Platte could be formulated, but it was in no way final or conclusive and was in fact interfered with if not entirely vitiated by storms

In 1916 a much more complete and thorough investigation was carried on by the State Engineer's office, the results of which would have been published by the then State Engineer, Mr. A. A. Weiland, had not the length of his biennial report been cut down in the interest of economy.

This investigation was carried on in the only practical way that such work can be done, viz.—as a quantitative study carried on over a period of time. An individual determination of a particular run may, if weather permits, give pretty conclusive evidence of loss at that particular time and under the conditions then existing, but it does not follow that the "coefficient of loss in transmission" so established will apply at other times, or on a higher or lower river.

Consequently it is easy to see that until we have accurate automatic records on every ditch, every tributary, and at frequent points on the main stream, it will be practically impossible to administer reservoir runs with complete satisfaction both to the reservoir itself and to other water users on the river.

ANTERO RESERVOIR TO LAKE CHEESMAN

The investigation, above referred to, was made to determine the loss in transmission between Antero Reservoir and Lake Cheesman on the upper South Platte in 1916. This stretch of the river was divided into several short sections by stations at which automatic gages were installed and all tributaries and diversions were also recorded (automaticlly wherever possible) and the records were obtained over a period of about five months, from late in May until the end of October, 1916.

The detailed study is on file in the State Engineer's office on pps. 59-95 of the unpublished chapters of the 18th Biennial Report.

The final conclusion reached was that the loss in transmission between Antero Reservoir and Lake Cheesman was 10.6%.

UNION RESERVOIR TO BIJOU DITCH

In July, 1919, certain land owners under the Bijou ditch purchased shares of water in the Union Reservoir near Longmont and proposed to run this water from the reservoir down Spring Gulch (perhaps two miles) to the St. Vrain, down the St. Vrain (15 miles) to the South Platte, and down the South Platte (about 35 miles) to the Bijou headgate near Hardin.

The St. Vrain was very low at the time, and the South Platte was practically dry at the mouth of the St. Vrain. It was apparent that the loss would be great and no figures were available as to how much it might be. Consequently Mr. R. G. Hosea, Deputy State Engineer, and Mr. J. H. Baily, Chief Hydrographer, were detailed to take charge of the run, the Bijou people agreeing to take whatever water these men were able to get through to them without disturbing the existing status of diversions on the rivers.

This illustrates the lengths to which irrigators will go to obtain water in a dry season.

The run was started on July 11th when a quantity of 94.5 sec. ft. of water was turned out of the Union Reservoir. The St. Vrain was carrying 27.4 sec. ft. at the mouth of Spring Gulch at the time and Boulder Creek was putting in 1.9 sec. ft. a short distance below.

The Last Chance and the Hayseed ditches (on the St. Vrain) were diverting 19.9 and 3.7 sec. ft., respectively, before the reservoir water reached them and afterward they were adjusted to carry the same amounts. No other ditches on the St. Vrain were diverting and no other tributaries come in below Boulder Creek.

The St. Vrain was measured at the mouth before the reservoir water arrived and was discharging 40.4 sec. ft. into the South Platte.

Proceeding down the South Platte ahead of the run, each ditch was measured and its water level marked by means of brass-headed tacks. Each tributary was also measured and marked with a gage. The only water in the South Platte was return seepage which developed between the headgates of the various ditches.

For several days Messrs. Baily and Hosea visited the various ditches and measuring stations, turning out water when necessary to bring the ditches down to what they were carrying previous to the run, measuring the rivers at various places and giving the run a close, personal supervision.

The following results were obtained:

92.5 sec. ft. of reservoir water turned out of Union Reservoir in addition to 2 sec. ft. already running.
40.0 sec. ft. at mouth of St. Vrain before run.
132.5 sec. ft. at mouth of St. Vrain if all of reservoir water arrived.
125.5 sec. ft. at mouth of St. Vrain after reservoir run reached this point.
7.0 sec. ft. difference or loss.

$\frac{7}{92.5}$ or 7½% loss in about 15 miles or ½% per mile.

Tabulating the results obtained for the run as a whole we have:

Section	Loss in Sec. Ft.	Per Cent Loss	Miles	Time to Reach Point Hours
From Union Res. to mouth of St. Vrain	7	7½	15	20
From Union Res. to Union Ditch	10	10	20	24
From Union Res. to Latham Ditch	20	21	28	40
From Union Res. to Kersey	23	25	36	55
From Union Res. to Bijou Ditch....561 ac. ft. in 1,700		33	52	79
(Bijou received 1,140 by automatic gage.)				

It is evident that the loss of ½% per mile which was sustained in the St. Vrain channel was greatly increased when the water reached the broad, sandy and nearly dry channel of the South Platte, and yet the total delivery of 67% of the reservoir water was greater than was expected.

The reason for this was that each ditch between the reservoir and the point of delivery was personally visited, many times, and regulated so that no excess water was taken in during the run. If this had not been done and headgates had been left as they were when the run started, it is evident that each ditch would have carried more water while the run was in progress, due to the raise in the river.

It is this regulation which is so hard to obtain where a reservoir uses the channel of a stream, for long distances and without it, the intervening ditches will pick up the greater part of the reservoir water, either involuntarily or not.

Consequently the proper administration of a reservoir run means detailed continuous supervision of a large territory (sometimes 150 miles of river in the case of some of the Arkansas River runs), and this supervision must continue throughout the time that the run is in progress.

CHAMBERS LAKE TO LARIMER COUNTY DITCH

Another reservoir run which has been the subject of much complaint is that of water from Chambers Lake to the Larimer County Ditch.

Chambers Lake, at the headwaters of the Poudre River, receives water from several sources, the principal ones of which are Trap Creek, Joe Wright Creek, Fall River and the Laramie River via the Sky Line Ditch. The lake lies at an altitude of about 9,200 feet and discharges into the Poudre River, whence it is diverted into the Larimer County Canal, near the mouth of the Poudre Canon, some 45 miles distant and perhaps 3,500 feet lower in elevation.

It has been the custom to charge Chambers Lake 5% for loss in transmission, an arbitrary figure based on measurements which I understand were never satisfactorily completed. Complaint has been frequently made to this office by the lower Poudre ditches that this 5% deduction is insufficient.

An attempt was made in September, 1920, to obtain some figures on loss in transmission during one of these runs, but as we were not informed that Chambers Lake was running water until almost the day before it was shut off, there was not time to conduct much of an investigation.

However, on September 9th Mr. R. G. Hosea, Deputy State Engineer, and Mr. W. T. Blight, Hydrographer, Division No. 1, went to Fort Collins and made an attempt to study the Chambers Lake run then in progress. Only one day was available during which the run would continue and no amount of persuasion would induce the Chambers Lake people to continue it longer.

Consequently on September 10th Mr. Hosea and Mr. Blight proceeded up the Poudre River, obtaining the following measurements:

Poudre River at Canon Station	440	sec. ft.
Poudre Valley Canal (diverts above station)	126	" "
Total River at Mouth of Canon	526	" "
North Fork Poudre River at Livermore	18	" "
Elkhorn Creek at Elkhorn	2	" "
Seven Mile Creek	2	" "
Unnamed Tributary Near Home	2	" "
Poudre River at Home	421	" "

On September 11th they proceeded up the river from Home to Chambers Lake with the following results and findings:

Peterson Creek	5	sec. ft.
Greeley-Poudre Tunnel (water from Laramie River)	20	" "
Big South Fork (including Grand River water)	62.2	" "
Chambers Lake Outlet (after run was shut off)	32.7	" "
Total	119.9	" "

Trap Creek	3.4	" "
Joe Wright Creek	19.6	" "
Fall River	10.0	" "
Sky Line Ditch	0.0	" "
Laramie Lake to Chambers Lake	0.0	" "
Total Inflow to Chambers Lake	33.0	" "

(It will be noted that the measured inflow and outflow to and from Chambers Lake check within 3/10 sec. ft. in 33 or less than 1%, which is well within the possible accuracy of current meter measurements on these mountain streams.)

Allowing the river a day to settle, the river was again measured at Home at 10 a. m. September 12th and a total of 120.9 sec. ft. was found. Thus the fall in the river due to the shutting off of Chambers Lake was found to be 421 minus 120.9 or 300.1 sec. ft.

The run was considered and handled as a run of 300 sec. ft., so this is a most remarkable check. Also, if we consider the sum of the various measured streams above Home, we find a total of 119.9 sec. ft. as against 120.9 sec. ft. actually measured at Home. Here again is a remarkable check within 1%, and it tends to show that the loss from Chambers Lake down to Home is negligible.

From Home to the mouth of the canon our data are less reliable and depend largely on the automatic record at the canon station. This shows that the effect of the shutting off of the Chambers Lake run was probably apparent at the mouth of the canon in fifteen hours, but the river continued to fall for several days, due to the reservoir water running out and to other causes not apparent. The reservoir run was shut off at 6:00 a. m. September 11th. At 9:00 p. m. September 11th the river at the canon station was at its high point—487 sec. ft. It then began to fall. If we allow all day of September 12th and all day of September 13th for the reservoir water to run out, and use the mean flow for September 14th, we have 190 sec. ft. at the canon and a drop of 487 minus 190 or 297 sec. ft. as the amount of reservoir water at the mouth of the canon. This would indicate that the loss in transmission is negligible.

If we allow only one day for the water from Chambers Lake to pass the station, we have 487-215 or 272 sec. ft. as the measure of the Chambers Lake water. This would indicate a loss of 28 sec. ft. in 300 or say 9%.

Our data are not sufficient to do more than indicate that the loss lies between these extremes, and consequently the old figure of 5% seems to be a reasonable measure of the loss.

It should be borne in mind that this run is made through a rocky canon, where no diversions exist, and where the velocities are high, and the loss is consequently small.

In August, 1921, another investigation of conditions at Chambers Lake was made by Mr. Hosea, Deputy State Engineer, and Mr. Baily, Chief Hydrographer, with the following results:

Inflow to Chambers Lake:

Trap Creek	7.6	sec.	ft.
Joe Wright Creek	51.0	“	“
Fall Creek	9.2	“	“
Unnamed Creek	0.5	“	“
Sky Line Ditch	35.0	“	“
Total	103.3	“	“

Outflow from Chambers Lake 104.5 sec. ft. (difference 1.2 sec. ft. or about 1%).

Outflow from Chambers Lake	104.5	sec.	ft.
Big South Fork	80.3	“	“
Sheep Creek	2.0	“	“
Greeley-Poudre Tunnel	5.0	“	“
Roaring Creek	5.0	“	“
Total	196.8	“	“
Poudre River at Home	193.0	“	“

(Indicating that there is little if any loss from Chambers Lake to Home, as the difference of 4 in 200 or 2% may very well be errors in measurement.)

A drop in the river due to the shutting off of Joe Wright reservoir made it impossible to continue the work between Home and the mouth of the canon.

LAKE CHEESMAN TO THE HENRYLYN DISTRICT

In 1918 a run of water was made from Lake Cheesman to the Henrylyn District, as a war measure to save wheat, and since that time more or less water has been run from the lake to the district every summer. Usually these runs are viewed with apprehension by everyone concerned. The water users below the Henrylyn (Burlington) Canal are apprehensive for fear the river will be robbed, the Water Board expect to be accused of not turning sufficient water out of Lake Cheesman, the Henrylyn people worry for fear they will not get the water which they have bought and paid for, and the State Engineer's office becomes the storm center where all concerned pour forth their grievances.

As a matter of fact these apprehensions and grievances are largely imaginary. The writer has personally witnessed nearly all of these runs from the first one in June, 1918, to the last in August, 1922, and all have been watched closely by interested parties and by the State Engineer's office. If it were commonly understood how relatively easy the control of these runs is, it might be that less complaint would result.

The water turned out of Lake Cheesman is checked in three ways—first, by the capacity table of the lake itself; second, by the automatic recording station on the South Platte at South Platte; and third, on the weir at the intake of the city pipe line. Thus it should be possible to closely approximate the amount of water turned out of Lake Cheesman, and the Water Board of the City of Denver has always shown itself ready to furnish full information to those concerned.

On its journey through District 8 the water must pass several small ditches and one large one, the Highline. Here the Water Commissioner comes in, and by keeping his ditches down to the amounts which they were diverting prior to the run, he insures the arrival of the water at Denver.

At Denver the reservoir water punches the time clock, so to speak, and "Checks in" at the Denver automatic gage, and within four miles is measured into the ditch of the Henrylyn district.

Numerous runs have demonstrated that, under ordinary conditions, the loss in transit from Lake Cheesman to the Burlington ditch (through which the Henrylyn water is run) is about 7½% and the time in transit is about 24 hours. (Distance about 50 miles.) Neither figure is absolute, and may vary with different climatic and river conditions, but the runs are under close supervision and comparatively easy to control, and as the State Engineer's Department is not "playing favorites," it would seem that these runs might be made without so much complaint and so many "kicks" as have been registered in the past.

TWIN LAKES TO COLORADO (BOB CREEK) CANAL

The Twin Lakes are situated on Lake Creek a short distance above its confluence with the Arkansas River near Granite, Colorado. They are channel reservoirs formed by the enlargement of natural lakes and lie at an elevation of about 9,000 feet.

Water is run from Twin Lakes into the Arkansas River and taken out by the Colorado (or Bob Creek) Canal, the headgate of which is located on the north bank of the Arkansas about nineteen miles east of Pueblo. From Twin Lakes to the canal the total distance is about 160 miles, as scaled along the river on Clason's large wall map of Colorado.

Within this stretch of river lies practically all of the irrigated area of the upper valley, from Granite to Canon City, all of the fruit country around Canon City and Florence and all of the Pueblo county ditches as far east as Boone.

It is evident that the determination of the loss in transit in such a reservoir run is something of a problem. It has never been satisfactorily solved and an arbitrary deduction of 10% has been made.

A considerable amount of time and study was spent on this problem during the summer and fall of 1922, but it is thought best not to publish the findings at this time as they are not definite and conclusive and much remains yet to be done.

The following figures will give an idea of the general effect of these reservoir runs on the river.

At 8:00 a. m. August 5, 1922, a reservoir run was started from Twin Lakes. The outlet channel is equipped with a good rating flume and an automatic gage. The record sheets from this instrument show that prior to making this run the outlet was discharging 91 sec. ft. to the river. This represents the natural flow of the streams tributary to Twin Lakes and passing through them to the river. (Measurements on August 7th showed that Lake Creek above Twin Lakes was carrying 85 sec. ft. and other smaller tributaries at least 6 sec. ft. more, so that the outflow of 91 sec. ft. was approximately correct.)

The outlet gates were opened, beginning at 8:00 a. m., and at noon the automatic gage showed 506 sec. ft. passing. The difference (506 minus 91), 415 sec. ft., represents the amount of water turned out for this run.

At Granite the State Engineer's office maintains a measuring station on the Arkansas River. This station is equipped with an automatic gage. The actual distance below Twin Lakes is about four miles, measured along Lake Creek and the Arkansas River.

The records of the automatic gage at Granite show:

August 5th—Gage, 1.9-349 sec. ft. up to 9:30 a. m.: 9:30 a. m., reservoir run reached Granite; 11:00 a. m., gage 2.48-651; noon, gage 2.50-664 sec. ft. Gage height remained the same up to 3:30 p. m. August 7th.

A discrepancy is immediately apparent. The amount of the rise is 664 minus 349, or 315 sec. ft., and yet four miles above we found 415 sec. ft. turned out of Twin Lakes. This extra 100 sec. ft. could not have been lost in four miles and there are no intermediate diversions.

Only three explanations are then possible, either the 415 sec. ft. figure is wrong (which means that the rating table for the Twin Lakes outlet is incorrect), the 315 sec. ft. figure is off (indicating that the Granite station rating table is in error) or the river at Granite fell 100 sec. ft. between 9:30 a. m. and noon. Measurements were made at the Twin Lakes outlet and at Granite on August 8th, which checked the figures already given, so we are forced to conclude that the river fell, and when we consider that it would only have to fall about a tenth and a half in gage height, we see that this supposition is reasonable.

This brings out the fact that very ordinary, natural fluctuations in the streams may affect our figures in a way that is confusing to say the least.

About 44 miles below Granite another state station equipped with an automatic gage is maintained at Salida. Records of this station show:

August 5th	9 p. m.	Gage	2.5 — 634	sec.	ft.
	10 p. m.	“	3.1 —1030	“	“
	11 p. m.	“	3.17—1079	“	“
August 6th	4 p. m.	“	3.20—1100	“	“
	7 a. m.	“	3.20—1100	“	“
	Noon	“	3.17—1079	“	“

The run was therefore visible at Salida 11½ hours after it first reached Granite, indicating a speed of travel of about 3.8 miles per hour through this stretch of the river.

The altitude of Granite is 8,930, while that of Salida is 7,038, so that the fall is 1,892 feet in 44 miles, or 43 feet per mile.

Apparently the reservoir water has consolidated somewhat as the river shows an increase of nearly 400 sec. ft. in an hour. The discrepancy of 100 sec. ft., which was apparent at Granite is not visible at Salida, and the extra raise of 70 sec. ft. must be due to other causes than the reservoir run. (Perhaps a rise in some tributary.)

Some 53 miles below Salida we come to the Canon City station, also equipped with an automatic gage whose records show:

August 6th 9:30 a. m., gage 1.4—755 sec. ft., at which time a rise appeared. This rise continued unevenly until 4 p. m. when the gage read 1.96 or 1255 sec. ft. This is an increase of 500 sec. ft. and must therefore include some other water in excess of the reservoir run.

The run apparently reached Canon City 12½ hours after it passed Salida. The speed of flow was therefore 4¼ miles an hour. Altitude at Salida 7,038, at Canon City 5,363. Fall 1,675 ft. in 53 miles, or 31.6 ft. per mile (on the average).

Forty miles (along the river) below Canon City is the state station at Pueblo, but the reservoir run is not visible on these records for the reason that a flood from some tributary reached Pueblo about 4:30 p. m. of August 6th, and the flow increased to something like 7000 sec. ft. This flood lasted only a short time, and when it had passed the river had fallen to 1350 sec. ft. Prior to the flood the flow was about 930 sec. ft., so that the difference or 420 may be considered as due to the reservoir run, though this is not conclusive evidence. If it were it would indicate no loss in transmission whatever between Twin Lakes and Pueblo.

The time in transit between Canon City and Pueblo is not apparent. The fall is 688 feet or 17.2 feet per mile.

The Twin Lakes run was shut off at 8:00 p. m. August 12th.

The gage at the outlet rating flume showed a flow of 622 sec. ft. at 8:00 p. m. and 79 sec. ft. at 10:00 p. m., a drop of 543 sec. ft.

The Granite gage dropped from 800 sec. ft. at 8:30 p. m. to 270 sec. ft. at midnight, a fall of 530 sec. ft.

The Salida gage recorded a fall from 922 sec. ft. at 4:00 a. m. of August 13th to 444 sec. ft. at 3:00 p. m., a total of 548 sec. ft.

The Canon City gage showed 1028 sec. ft. flowing at 7 p. m., Aug. 13th, and 604 sec. ft. at 7 a. m., Aug. 14th, a difference of 424 sec. ft.

The Pueblo gage fell from 1106 sec. ft. at 3 a. m., Aug. 14th, to 606 sec. ft. at 3 a. m., Aug. 15th, a total of 500 sec. ft.

It is evident that it takes the water longer to run out of the river after a run than it does for the full amount to become apparent when a run is started.

The above study would indicate that the actual loss in transmission of reservoir water is small, but there are other considerations which enter into the determinations and lack of space prevents their discussion.

CHAPTER VII

ANNUAL REPORTS OF DIVISION ENGINEERS

ANNUAL REPORT IRRIGATION DIVISION ENGINEER DIVISION No. 1, 1921

December 15, 1921.

Mr. A. J. McCune, State Engineer,
Denver, Colo.

Dear Sir: I herewith submit my report for Irrigation Division No. 1 for the year 1921.

The first use of water for irrigation was reported on March 5th, from District No. 6.

During the rain and blizzard of April 15th, a depth of snow of 11 inches and a total precipitation of 1.73 inches were reported.

The melting of this snow and the snow and rain of April 24th caused some high water.

Lake Cheesman was reported full on May 11th, and the South Platte River was dry at Platteville.

The first use of reservoir water was reported May 14th, in District No. 3.

The cloudbursts and floods at Boulder, Longmont and Loveland, on June 3rd, caused some excitement over safety of reservoirs, but only two small reservoirs in District No. 4 were overtopped by the floods and went out.

Marshall reservoir in District No. 6 was reported in bad condition and 3,000 acre-feet of water was discharged in order to save the embankment.

The first demand for water was received July 11th from District No. 1, for 100 sec. ft. to supply 1888 appropriations.

Districts No. 1 and No. 64 reported on Sept. 22nd that all demands for direct irrigation were supplied and orders to that effect were issued to Districts Nos. 2, 3, 4, 5 and 6.

District No. 1 on October 10th made demand for 200 sec. ft. to supply the Bijou Ditch appropriation of 1888. This shortage was supplied and on October 15th, orders were issued to all districts, except No. 23, to store water in decreed reservoirs.

Lake Cheesman was allowed to store on Nov. 14th, after the Highline Canal was reported closed for the season.

On Nov. 22nd, permission was given to all districts to store any excess water in undecreed reservoirs.

I hereby attach the regular statutory tabulation of the Water Commissioners' annual reports.

Respectfully submitted,
(Signed) F. COGSWELL,
Irrigation Division Engineer,
Irrigation Division No. 1.

IRRIGATION DIVISION No. 1

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORTS FOR THE IRRIGATION SEASON OF 1921.

District	Number of Reservoirs Reported	Area of High Water Line Acres	Capacity in Acre-Feet	Quantity of Water in Reservoirs May 1, 1921, Acre-Feet	Quantity of Water in Reservoirs Nov. 1, 1921, Acre-Feet	Quantity of Water Held Over from Nov. 1, 1920, Acre-Feet
1	4	9,899	139,982	127,672	24,854	5,395
2 (A)	29	7,698	100,177	80,184	34,052	0
3	58	10,297	158,907	78,336	35,468	38,063
4	11	4,934	94,930	68,697	35,715	33,244
5	19	2,446	32,803	32,170	16,109	15,983
6	30	3,010	48,597	39,624	24,964	15,333
7	73	0	21,752	10,469	4,614	4,426
		All in Castlewood Reservoir				
8	1	181	3,434	3,349	1,607	1,315
Marston Lake not included. Used by Denver Water Co. for domestic purposes.						
9	17	873	11,221	11,221	4,132	522
23 (B)	4	5,181	141,106	97,344	93,850	57,144
46	No annual report received.					
47	No annual report received.					
48	No reservoirs reported.					
64 (C)	4	7,093	141,520	100,171	28,376	14.903
65	3	18	92	92	69	46
Totals	253	51,630	894,521	649,329	303,810	186,374
Marston Lake		651	19,795	16,577	16,577	6,885

These "Annual Reports" of the Water Commissioners include many small reservoirs not included in their weekly reports.

(A) District No. 2 includes storage in Standley Lake.

(B) District No. 23 compiled from the reports of this office. No annual reservoir report received from the Water Commissioner.

(C) District No. 64 includes storage in Pt. of Rocks and Prewitt Reservoirs, and Julesburg Reservoir.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921.

(1) District	(2) Amount of Appropriation in Second Feet	(3) Capacity of Ditches in Second Feet	(4) Length of Main Ditches in Miles	(5) Length of Laterals in Miles	(6) First Day Water Diverted Natural Streams for Irrigation
1	2.942	2,635	368	328	March 4
2	4,599	3,052	353	115	March 15
3	3,890	3,700	381	1,310	April 28
4	2,470	2,648	245	164	April 24
5	2,369	1,664	254	251	May 2
6	2,734	2,084	310	262	March 1
7	1,689	1,148	223	70	April 1
8	2,145	1,613	295	390	March 3
9	384	339	52	47	April 22
23	1,129	1,144	102	....	May 20
46			No annual report received		
47			No annual report received.		
48	1.224	....	101	....	April 21
64	3,521	3,470	308	274	March 7
65	153	159	37	....	April 1
Totals	29,249	23,656	3,029	3,211	

IRRIGATION DIVISION No. 1—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921.

District	(7) Last Days Water Diverted from Natural Streams for Irrigation	(8) Maximum No. of Days Water Diverted from Natural Streams for Irrigation	(9) Maximum No. of Days Water Carried from Reservoirs	(10) Amount of Water Carried from Reservoirs in Acre-Feet (See "Note")
1	Nov. 15	257	86	61,428
2	Oct. 29	229	184	(A) 69,593
3	Oct. 25	181	1	93,270
4	Oct. 31	191	150	53,326
5	Oct. 15	167	53	22,781
6	Nov. 9	254	......	27,170
7	Nov. 15	229	......	18,305
8	Oct. 31	243	103	7,622
9	Oct. 25	187	......	13,946
23	Aug. 6	79	......	(B) 9,000
46		No annual report received.		
47		No annual report received.		
48	Aug. 10	112	......	....
64	Oct. 31	239	118	(C) 77,566
65	Oct. 30	213	20	80
Totals				454,087

Note: The quantities in column (10) represent the reported acre-feet in the reservoirs on May 1, 1921, minus the acre-feet reported in the reservoirs on Nov. 1, 1921, plus the acre-feet diverted from the rivers for storage from May 1 to Nov. 1, as given in the weekly reports of the Water Commissioners, except in Districts 1, 2, 8 and 64, which are given as reported by the Water Commissioners.

The "Annual Reports" of the Water Commissioners include many small reservoirs not included in their weekly reports. These quantities are, therefore, only approximate but they are the only ones available.

(A) District No. 2 includes storage in Standley Lake.

(B) District No. 23; the 9,000 acre-feet were diverted for use in districts Nos. 2 and 8 by the Burlington and Denver Water Works, 8,400 acre-feet from Lake Cheesman for pipe line.

(C) District No. 64, includes storage in Pt. of Rocks and Prewitt Reservoirs and in Julesburg Reservoir.

IRRIGATION DIVISION No. 1—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921.

	(11)	(12)	(13)	(14)	(15)
				CROPS IRRIGATED, ETC.	
District	Maximum Average Daily Amount of Water Diverted by Ditches During Season from Natural Streams for Irrigation Second-Feet	No. of Acre-feet diverted by Ditches during Season from Natural Streams for Irrigation (See "Note")	Total No. of Acres that can be Irrigated (See "Note")	Alfalfa	Natural Grasses
1	1,436	402,086	145,950	34,025	12,078
2	1,549	441,409	171,721	47,533	2,300
3	1,412	365,099	398,160	64,080	5,845
4	557	135,282	141,340	34,450	255
5	365	68,748	101,400	23,039	3,985
6	565	94,416	121,358	22,276	11,725
7	418	141,347	113,065	37,943	2,982
8	499	181,300	139,713	16,669	1,466
9	167	40,619	20,806	6,622	2,507
23	950	123,240	25,100	....	25,100
46		No annual report received.			
47		No annual report received.			
48	....	....	8,062	....	6,239
64	917	232,394	201,241	34,541	20,532
65	84	16,727	7,294	1,322	171
Totals	8,919	2,242,667	1,595,210	322,500	95,185

Note: The quantities given in columns (13) to (25), represent the total acreage that can be irrigated or was irrigated, whether the ditches only used the natural flow of streams, or only used reservoir water, or used river and reservoir water combined.

The approximate amount of water used in any district, except in Districts 2, 3 and 8, will be found by adding together the "Number of Acre-feet diverted by Ditches during Season from Natural Streams," given in column (12) and the "Amount of Water carried from Reservoirs in Acre-Feet" given in column (10).

In District No. 2, 500 Acre-Feet additional were diverted from District No. 23 and used for direct irrigation.

In District No. 3, 34,000 Acre-Feet additional were diverted from Districts Nos. 47, 48 and 51, and used for direct irrigation.

In District No. 7, no water was diverted from District No. 51.

In District No. 8, 8,400 Acre-Feet additional were diverted from Lake Cheesman in District No. 23, and distributed to the Denver Water Works.

No water used from Antero Reservoir.

IRRIGATION DIVISION No. 1—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921.

CROPS IRRIGATED FROM CANALS IN ACRES

District	(16) Cereals	(17) Orchards	(18) Market Gardens	(19) Potatoes	(20) Sugar Beets	(21) Beans
1	25,610	51	37	1,970	30,971	....
2	62,233	103	2,528	7,963	30,516	2,343
3	93,280	2,585	1,890	38,681	51,341	1,200
4	67,780	1,880	245	3,135	16,295	255
5	43,326	370	150	383	11,955	165
6	39,560	636	505	1,414	16,649	446
7	40,775	4,497	12,673	755	2,025	....
8	23,707	1,005	12,669	800	1,854	....
9	4,706	334	12	7	240	....
23	....	....	....	....	....	....
46	....	....	....	....	....	....
47	....	....	....	....	....	....
48	....	....	....	....	....	....
64	37,767	255	114	2,445	30,144	....
65	863	24	17	63	160	....
Total	439,607	11,740	30,840	57,616	192,150	4,409

CROPS IRRIGATED FROM CANALS IN ACRES—COST DOLLARS

District	(22) Peas	(23) Cabbage	(24) Other Crops	(25) Total Irrigated	(26) Superintendence	(27) Repairs	(28) Improvements
1	....	....	16,363	121,105	27,675	32,476	91,395
2	50	3,704	6,123	165,396	51,690	41,340	27,560
3	675	2,055	2,708	264,340	....	....	....
4	1,110	495	3,580	129,480	23,350	4,050	19,300
5	1,000	....	1,382	85,755	....	48,750	....
6	719	606	1,145	95,681	14,725	55,125	12,460
7	....	880	60	102,590	....	....	....
8	....	....	585	58,755	3,700	55,975	3,597
9	....	24	2,633	17,085	3,310	4,123	3,338
23	....	....	....	25,100	....	....	....
46	....	....	....	....	....	....	....
47	....	....	....	....	....	....	....
48	....	....	....	6,239	....	....	....
64	....	30	4,140	129,968	24,355	44,169	8,984
65	....	....	542	3,162	1,000	1,400	350
Total	3,554	7,794	39,261	1,204,656	149,805	286,508	166,984

ANNUAL REPORTS OF DIVISION ENGINEERS.

ANNUAL REPORT OF IRRIGATION DIVISION ENGINEER DIVISION No. 1, 1922

December 2, 1922.

Mr. A. J. McCune, State Engineer,
Denver, Colorado.

Dear Sir: I herewith submit my report for Irrigation Division No. 1 for the year 1922.

On April 16 there was a reported fall of snow to a depth of 15 inches in Denver.

Since that date the precipitation has been below normal in the division each month, with the exception of a small excess during August.

There have been only two drier Septembers of record in the state and crops were unfavorably affected by the lack of moisture, and the ground was too dry for fall plowing.

During October water was in demand for irrigation of beets in order to plow them out of the ground.

Orders were issued on April 22, to all districts to shut down ditches of later date than 1900 to supply a shortage of 650 sec. ft. for prior appropriations in Districts Nos. 1 and 64.

This shortage was supplied by the melting snow and rain, and on April 26th the order was recalled.

On May 11th there was a shortage of 180 sec. ft. in District No. 2, prior to January 1, 1879.

On July 17th there was a shortage of 80 sec. ft. in District No. 2, prior to January 1, 1867.

On May 17th, 200 sec. ft. were discharged from Lake Cheesman to the credit of Antero Reservoir and diverted by the Highline Canal in District No. 8.

Since that date about 33,000 acre-feet have been discharged from Lake Cheesman for irrigation in Districts No. 8 and No. 2.

In using the river as a conduit for reservoir water there is no such day as "Sunday," and these runs of reservoir water materially increased the amount of water in the river, very much to the annoyance of some of the Sunday fishermen.

Query: Shall we continue to run reservoir water from Lake Cheesman for irrigation purposes, or shall we stop it and go fishing?

The 10 inches of snow on November 11th and 12th supplied all demands for direct irrigation, and on November 13th orders were issued to Districts Nos. 1 to 9 and Lake Cheesman to store water in reservoirs.

IRRIGATION DIVISION No. 1—Continued

It may be of interest to note that in a late decree for reservoirs in District No. 3, they are decreed only one filling "for any irrigation season, unless all junior appropriations have been satisfied, and then only in the order of its priority."

I hereto attach the statutory tabulation of the Water Commissioners' annual reports.

Respectfully submitted,
(Signed) F. COGSWELL,
Irrigation Division Engineer,
Irrigation Division No. 1.

IRRIGATION DIVISION No. 1

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORTS FOR THE IRRIGATION SEASON OF 1922

District	Number of Reservoirs Reported	Area of High-Water Line Acres	Capacity in Acre-Feet	Quantity of Water in Reservoirs May 1, 1922 Acre-Feet	Quantity of Water in Reservoirs Nov. 1, 1922 Acre-Feet	Quantity of Water Held Over from Nov. 1, 1921 Acre-Feet
1	15	11,800	159,766	121,308	3,880	24,854
2 (A)	38	7,470	120,752	84,969	....	34,052
3	59	10,400	161,663	72,957	5,257	35,468
4	13	4,184	95,533	49,311	16,356	35,715
5	66	2,483	37,891	25,790	2,781	16,109
6	31	3,340	49,604	26,865	5,648	24,964
7	76	....	22,855	10,928	817	4,614
			All in Castlewood Reservoir			
8	1	181	3,434	3,434	518	1,607
		Marston's Lake Not Included; Used by Denver Water Co. for Domestic Purposes				
9	17	873	11,221	4,751	....	4,132
23 (B)	4	5,181	141,106	106,618	53,579	93,850
46			No annual report received			
47			No annual report received			
48			Not reported			
64 (C)	4	7,093	141,520	70,528	1,606	28,376
65	3	18	92	69	69	69
Totals	327	53,023	945,259	577,528	90,511	303,810
Marston Lake		651	19,795	19,795	525	16,577

These "Annual Reports" of the Water Commissioners include many small reservoirs not included in their weekly reports.

(A) District No. 2 includes storage in Standley Lake.

(B) District No. 23 compiled from the reports of this office. No annual reservoir report received from the Water Commissioner.

(C) District No. 64 includes storage in Point of Rocks and Prewitt Reservoirs, and Julesburg Reservoir.

IRRIGATION DIVISION No. 1—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

	(1)	(2)	(3)	(4)	(5)
				CROPS IRRIGATED, ETC.	
District	Average Daily Amount of Water Diverted by Ditches During Season from Natural Streams for Irrigation Second-Feet	No. of Acre-Feet Diverted by Ditches during Season from Natural Streams for Irrigation (See "Note")	Total No. of Acres that can be Irrigated (See "Note")	Alfalfa	Natural Grasses
1	1,168	228,749	203.980	38,705	20,970
2	1,050	278,986	180,679	50,464	4,285
3	1,069	218,613	388,140	63,290	5,690
4	477	91,708	141,440	36.700	305
5	339	57,226	103,140	16.200	3,095
6	686	88,125	156,354	20,440	9,070
7	376	118,620	113,065	37,948	2.982
8	356	83,476	139,645	14,101	1,276
9	202	45,841	22.303	8,769	2.155
23	Only 60 ditches reported out of 409 decreed ditches				28,000
46	No annual report received				
47	No annual report received				
48	437	51,506	8,016	....	7,242
64	723	190,005	197,720	35.581	18,415
65	82	16,540	3,414	914	209
Totals	6.965	1,469,395	1,657,896	323,112	103,694

Note: The quantities given in columns (3) to (15) represent the total acreage that can be irrigated or was irrigated, whether the ditches only used the natural flow of streams, or only used reservoir water, or used river and reservoir water combined.

In District No. 2, 11,645 acre-feet additional were diverted from District No. 23, and used for direct irrigation, also 6,316 acre-feet from District No. 5. in District No. 3, 33,219 acre-feet additional were diverted from Districts Nos. 47, 48 and 51, and used for direct irrigation.

In District No. 7 no water was diverted from District No. 51. In District No. 8, 39,455 acre-feet additional were diverted from District No. 23, and distributed to the Highline Canal and Denver Water Works.

23,900 acre-feet from Lake Cheesman to credit of Antero Reservoir and 15,555 acre-feet for Denver Water Works.

IRRIGATION DIVISION No. 1—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

	(6)	(7)	(8)	(9)	(10)	(11)
	CROP IRRIGATED FROM CANALS IN ACRES					
District	Cereals	Orchards	Market Gardens	Potatoes	Sugar Beets	Beans
1	28,350	49	45	5,497	27,380	700
2	65,500	502	3,419	11,073	25,992	3,479
3	100,950	2,581	2,097	44,055	39,987	1,486
4	78,845	2,065	420	5,125	13,890	450
5	39,575	549	95	436	6,985	210
6	31,135	828	1,309	2,273	14,465	559
7	40,815	4,497	13,033	895	1,405	....
8	25,602	1,016	10,699	900	705	....
9	5,803	160	157	51	87	....
23	Only 60 ditches reported					
46	No annual report received					
47	No annual report received					
48	....	....	....	....	....	....
64	36,059	93	140	2,928	25,159	212
65	250	9	19	65	....	....
Totals	449,884	12,349	31,433	73,298	156,055	7,096

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	CROPS IRRIGATED FROM CANALS IN ACRES—COST DOLLARS						
District	Peas	Cabbage	Other Crops	Total Irrigated	Superintendence	Repairs	Improvements
1	....	81	18,484	140,261	....	....	....
2	434	5,141	10,305	180,594	31,783	35,635	18,567
3	725	2,427	2,652	265,940	....	....	....
4	1,110	1,415	2,735	140,060	23,750	3,550	3,550
5	550	130	1,000	68,825	....	42,340	....
6	811	1,189	4,796	86,875	15,855	38,370	25,075
7	....	870	175	102,620	....	....	....
8	....	....	1,245	55,544	2,500	46,209	1,395
9	....	99	3,067	20,348	5,182	4,859	7,230
23	Only 60 ditches reported			28,000	....	....	....
46	No annual report received						
47	No annual report received						
48	....	....	....	7,242	....	1,032	146
64	....	25	7,146	125,758	18,207	31,724	9,287
65	....	....	85	1,551	1,000	1,965	....
Totals	3,630	11,377	51,690	1,223,618	98,277	205,684	65,250

ANNUAL REPORT IRRIGATION DIVISION ENGINEER DIVISION No. 2, 1921

Pueblo, Colo., December 1, 1921.

Hon. A. J. McCune, State Engineer,
Denver, Colorado.

Dear Sir: I have the pleasure to submit to you herewith my annual report for Irrigation Division No. 2, for the year ending Nov. 30, 1921.

The past season will long be remembered by the irrigators and many others for the exceptional high water of June 3rd, 4th and 5th, which were caused by the excessive rains on the afternoon of June 3rd, 1921. The City of Pueblo experienced the most disastrous flood in its history.

The estimated discharge of the Arkansas River at Pueblo was 100,000 second feet. East of Pueblo the flood in the Arkansas was increased by the Fountain, St. Charles, Chico and Huerfano Rivers. The estimated discharge at La Junta was 200,000 second feet and at Lamar the peak of the flood was 170,000 second feet.

Mr. H. D. Amsley, hydrographer connected with this office, has submitted to you a very painstaking report concerning this flood. I would refer you to this report for the technical details of the flood. Mr. Amsley was of great assistance to the engineers employed by the City of Pueblo to report on the flood by giving them data about the high waters.

When the flood had passed there was not a canal that had not been damaged by the high waters. Many canals were so badly out of commission that it was with great difficulty that water could again be turned into them. Prospects for irrigation water was not of the best. However, by great effort on the part of the management of some of the canals, water was eventually turned into the canals and the crops irrigated. Seasonable rains assisted greatly in maturing the crops and on the whole a good crop was raised.

The total cost of repairs to canals in the path of the flood was $678,300.00. These figures were obtained from the canal companies after the repairs had been completed so they are fairly correct. This makes the cost per acre of irrigated land at $1.40. All canals will have completed their repairs and be in condition to run water by spring.

The money with which to complete the repairs was borrowed from the Federal Land Bank at Wichita, upon easy terms. Being able to secure this much needed money has been a great help to our irrigation interests.

Reservoir water is playing a large part in our irrigation. Reservoirs conserve the flood waters and they also supply water at times when there is a scarcity in the streams.

The total capacity of the reservoirs in this Division as reported by the Water Commissioners is given at 716,866 acre feet. The amount of water in storage on May 1st was 208,433 acre feet. The amount of water in storage on November 1st was 175,945 acre feet. During the summer months much water was run into and again run out of the reservoirs so that an account of the total amount of water run into the reservoirs is not available.

The total amount of land in this Division as reported by the Water Commissioners that can be irrigated is 626,818 acres. The total amount irrigated is reported at 482,677 acres. There is a total of 136,500 acres in alfalfa, 72,734 acres in cereals and 46,934 acres in sugar beets.

On the whole irrigation conditions are improving. The farmers are receiving better service from the canal managements, and the farmers themselves have learned much about handling and irrigating their crops.

During the past year I have personally visited and reported upon many of the reservoir dams in this Division. In a few cases I have found some unsafe conditions and have so reported to your office. A reservoir dam that is unsafe is a menace to the life and property below the dam and should be repaired at once.

There has been one dam failure during the past year, namely, the Schaffer dam on Beaver Creek. The cause of this failure was insufficient spillway capacity to take care of the unusual flood or flow of Beaver Creek.

In conclusion I desire to thank yourself, your office force and the Water Commissioners of this Irrigation Division for their hearty co-operation in handling the many problems that daily come up.

Yours truly,

(Signed) C. W. BEACH,
Irrigation Division Engineer,
Irrigation Division No. 2.

IRRIGATION DIVISION No. 2

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921.

No. of District	Amt. of Appro. in Cu. Ft. per Sec.	Capacity of Canals in Cu. Ft. per Sec.	Length of Main Canals in Miles	Length of Laterals in Miles	First Day Water was Diverted from Natural Stream
10	671.60	....	142.45	....	Feb. 15
11	826.00	869.0	339.5	....	May 1
12	787.00	....	....	....	Feb. 24
13	452.28	Not given	208.10	Not given	Apr. 22
14	2,177.56	Not given	Not given	Not given	Jan. 1
15	199.50	273.9	95.5	....	Mar. 1
16	1,100.00	....	....	....	Mar. 1
17	3,811.53	4,579.10	389.0	1,639.00	Mar. 1
18	....	171.0	48.5	70.5	Apr. 4
19	586.24	Not given	268.75	Not given	Mar. 1
67	1,553.16	1,673.0	221.1	190.5	

IRRIGATION DIVISION No. 2—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

No. of District	Last Day Water Deliv. from Nat. Streams	Max. No. of Days Water Deliv. from Nat. Streams	Max. No. of Days Water Carried from Res.	Amt. of Water Carried from Res. in Ac. Ft.
10	Nov. 1	165	......	......
11	Nov. 1	154	29	20,518.00
12	Oct. 31	365	......	......
13	Sept. 10	140	24	1.25
14	Dec. 31	365	40	......
15	Nov. 9	230	......	......
16	Oct. 11	320	......	......
17	Dec. 1	276	145	117,323.00
18	Sept. 20	80	......	......
19	Oct. 31	185	Not given	Not given
67	Dec. 31	365	85	48,821.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

				Crops	
No. of District	Average Daily Amt. Water Diver. from Natural Streams	No. of Ac. Ft. Diverted by Ditches During Season	Total No. of Ac. That Can Be Irrigated	Acres in Alfalfa	Acres in Nat. Grasses
10	269.0	41,325	25,985	7,714	4,537
11	687.0	201,932	33,950	7,478	7,504
12	......	128,453	27,226	7,692	2,035
13	1.08	40,383	19,538	1,861	13,915
14	565.5	213,509	125,650	46,732	10,436
15	100.0	26,565	12,678	4,142	1,620
16	......	......	36,881	18.662	4.899
17	1,067.0	306,472	241,002	5,802	14,744
18	161.0	13,218	5,576	2,959	823
19	Not given	Not given	33,622	11.544	5,189
67	......	126,235	64,700	21,910	7,050
Total			626,818	136,499	72,734

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPQRTS FOR THE IRRIGATION SEASON OF 1921

No. of District	Cereals	Orchards	Market Gardens	Potatoes	Sugar Beets	Other Crops
10	2,242	304	199	......	321	3,448
11	6,120	210	108	766	......	500
12	7,315	5,438	273	24	......	1,683
13	3,637	5	0	16	0	42
14	15,615	2,077	1,072	65	14,092	3,265
15	2,894	29	14	......	40	161
16	5,335	129	338	33	......	264
17	54,896	797	1,123	90	27,060	11,049
18	891	......	......	......	......	......
19	4,627	98	313	4	339	9,338
67	21,470	320	193	1	5,082	3,875
Totals	125,024	9,408	3,633	999	46,934	33,636

IRRIGATION DIVISION No. 2—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

No. of Dnstrict	Total Irrigated	Cost of Super-intendence	Repairs	Improve-ments	Damage Caused by Flood June, 1921
10	12,434	$	$22,000.00	$ 2,000.00	$ 25,000.00
11	26,239	8,578.00	....	....	....
12	24,660	....	....	....	....
13	19,538	....	911.00	....	....
14	110,647	26,083.00	99,644.00	111,931.00	186,000.00
15	8,927	....	....	1,372.00	25,000.00
16	30,539	....	....	....	....
17	168,454	32,085.00	30,367.00	266,775.00	250,000.00
18	4,673	....	....	....	....
19	30,459	21,651.00	....	300.00	....
67	56,207	8,640.34	11,198.91	7,621.91	92,300.00
Totals	482,677				$678,300.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

No. of District	Number of Reservoirs Reported	Capacity in Acre Ft.	Quantity of Water in Reservoirs May 1, 1921	Quantity of Water in Reservoirs Nov. 1, 1921
10	26	15,669	15,203	1,532
11	4	104,395	32,302	73,750
12	15	17,690	10,750	10,350
13	1	60	60	None
14	6	13,525	891	3,375
15	4	8,167	6,730	6,820
16	38	72,311	....	....
17	38	79,148	34,130	27,971
18	1	73,464	996	808
19	11	25,965	5,990	5,102
67	5	306,472	101,381	46,237
Totals		716,866	208,433	175,945

ANNUAL REPORT IRRIGATION DIVISION ENGINEER IRRIGATION DIVISION No. 2, 1922

Pueblo, Colo., Nov. 30, 1922.

A. J. McCune, State Engineer,
Denver, Colo.

Dear Sir: The irrigation season of 1922 will be remembered for the shortage of rainfall. On October 1st the U. S. Weather Bureau station at Pueblo records showed a shortage of 47 per cent below normal. The normal rainfall is 9.99 inches and the actual rainfall was 5.45 inches. This drought condition was general over the entire southeastern part of the state. In fact the shortage of rainfall extended over the entire state and parts of New Mexico, Texas and Kansas.

Crops under irrigation were generally good. The large amount of water stored in the reservoirs was of great help to the irrigators. The value of reservoir water was demonstrated many times during the past season. Water gives greater duty when it can be had as the crops need it.

The reports of the Water Commissioners of this Irrigation Division give a total of 753,350 acres that can be irrigated and a total of 521,013 acres that are actually irrigated. The time is fast approaching when all the land under irrigation will be cultivated.

The principal crops grown are alfalfa 203,826 acres, cereals come next with 128,275 acres, and sugar beets have an acreage of 31,550 acres. Farmers are changing their crops to suit local conditions and to fit in with their water supply. Indian corn is being cultivated to a greater extent than formerly. Any crop that can be irrigated by means of furrows or rows will take less water and less work irrigating than crops that require to be flooded.

In the mountain sections head-lettuce is receiving considerable attention. About 1,300 acres were grown in this Division last year. Much is still to be learned about planting, cultivating and preparing for the market of this crop. Where the grower is successful the crop pays well for time spent on it.

On May 1st there was a total of 313,381 acre-feet of water in storage reservoirs. This amount of water was practically all used during the irrigation season. The amount of storage water in reservoirs on November 1st was 49,244 acre-feet. Had it not been for this large amount of storage water at the beginning of the season many of our canal systems would have suffered materially from the lack of water for their crops.

Our irrigation conditions are slowly but surely improving. To my mind no better demonstration of this could be had than shown by results obtained during the past season when water was so short.

The scarcity and value of water gives rise to a demand that the best possible use of the water be secured. To that end at the request of the officers of the Arkansas Valley Ditch Association and others, automatic self-registers were installed at the rating flumes of all the larger canals on the Arkansas river beginning with the Bessemer Canal and going east to the Kansas state line. The charts on the registers were changed each week by the Water Commissioners of the district in which the headgate was located.

Without going into details as to the reason therefor I wish to state that the result has been excellent. The charts have materially assisted in our distribution in many ways. With a constantly fluctuating stream it is necessary to change the water into and out of the canals to keep up with changing conditions. To do this orders must be transmitted over the phone and the Commissioners must know that their orders are promptly executed. The automatic registers greatly assist in giving this information. I hope that all concerned will co-operate to the end that we may keep the self-registers on the rating flumes in the future.

Automatic self-registers were installed on five of the larger canals in District 19 at Trinidad. They have been of great assistance to the Water Commissioner in the discharge of his duties. The Water Commissioner visits the self-registers often and if anything is found to have gone wrong in his absence an adjustment is immediately made and water given to rightful party. The result has been that a better feeling exists between ditch owners and parties well informed believe that law suits have been avoided.

The work of this office has been greatly assisted by the hydrographers assigned to duty here, Mr. Amsley, Mr. Curtis and Mr. Burgess. They have been faithful and active in the discharge of their duties. I do not believe that three better men could have been secured.

I wish to thank you and your office force, the three hydrographers assigned to duty here and the Water Commissioners of Irrigation Division No. 2 for their faithful work and hearty cooperation during the past season, when we were confronted with many trying problems due to the shortage of water.

Respectfully submitted,

(Signed) C. W. BEACH,
Division Engineer of Irrigation,
Division No. 2.

IRRIGATION DIVISION No. 2—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922.

District No.	Amount Appropriated in Sec. Ft.	Capacity of Ditches in Sec. Ft.	Length of Main Ditches in Miles	Length of Laterals in Miles	First Day Water Was Diverted from Natural Stream for Irrigation	Last Day Water Was Diverted from Natural Stream for Irrigation
10	677.5	....	160.7	....	March 1	Oct. 31
11	746.9	1,233	544	151	May 1	Nov. 1
12	727.8	....	....	....	Nov. 1, 1921	Oct. 31, 1922
13	425.3	....	....	208.0	April 15	Aug. 25
14	2,231.0	2,985.0	....	....	Nov. 1, 1921	Oct. 31, 1922
15	201.3	267.9	90.5	....	April 1	Oct. 15
16	728.7	....	....	....	Jan. 2	Sept. 25
17	5,824	8,213.5	359	1,419	March 1	Nov. 31
18	....	192	46	46	April 7	Aug. 23
19	592	....	266	....		
49	First Commissioner appointed in July, 1922, but has not put in any time and did not make out a crop report.					
66	No Commissioner.					
67	1,456.2	1,713	224	195	Jan. 1, 1922	Nov. 31, 1922
	13,611					

IRRIGATION DIVISION No. 2—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District No.	Maximum Number of Days Water Diverted from Natural Stream for Irrigation	Maximum Number of Days Water Carried from Reservoirs	Amount of Water Carried from Reservoirs in Acre-Ft.	Average Daily Amt. Water Diverted by Ditches During Season from Streams Cu. Ft per Sec.	Number Ac. Ft. Diverted Ditches During Season from Natural Streams	Total Number Acres That Can Be Irrigated
10	158	....	Not given	215.0	33,197	25,285
11	214	....	Not given	618	178,982	31,765
12	344	154	1,631	....	120,187	31,878
13	130	8	59.5	264.7	39,254	19,627
14	365	45	900.0	893	232,550	148,280
15	180	164	96.3	81.2	11,439	12,474
16	......	96	....	271	10,107	36.419
17	275	110	60,227	1,631.8	380,836	281,531
18	60	0	0	69	1.877	4,969
19	......	35	7,490	....	Not given	34,213
49	......	....	....	....	....	....
66	......	....	....	....	....	....
67	225	....	Not given	368	128,404	126,909
					11,136,833	753,350

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District No.	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens	Potatoes
10	4,789	3,555	870	140	165	....
11	7,242	6,430	6.453	487	58	764
12	7,639	1,456	4,322	4,388	384	67
13	1,836	13,898	3.589	5	....	16
14	49,500	9,660	13,575	2,178	1,428	....
15	3,913	2,162	2,307	31	17	4
16	11,596	4,523	4,019	47	335	1
17	64,597	11,169	60,447	652	1,130	117
18	1,588	40	4	....	....	....
19	10,636	9,727	4,352	74	450	9
49	....	....	....	....	....	....
66	....	....	....	....	....	....
67	24,711	2,600	17,935	485	147	....
Total	188,047	65,270	117,879	8,487	8,487	978
Irrigated by reservoirs	15,779	1,840	10,396	791	109	1,810
Totals	203,826	67,110	128,275	9,278	8,596	2,788

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District No.	Sugar Beets	Corn	Head Lettuce	Beans	Melons	Other Crops	Total Irrigat'd
10	30	....	....	....	....	1,400	10,170
11	....	....	956	....	....	2,968	25,358
12	....	....	56	....	....	1,432	19,726
13	....	....	248	....	....	35	19,627
14	8,960	16,333	....	3,240	5,431	3.760	114,003
15	9	....	....	19	....	1,285	8,508
16	102	....	....	1,051	....	3,394	25,150
17	16,344	....	....	913	....	13,807	170,657
18	....	....	....	....	....	....	....
19	134	....	....	492	....	2,240	28,113
49	....	....	....	....	....	....	....
66	....	....	....	....	....	....	....
67	4.798	....	....	13	....	3,825	54,514
Totals	30,377	16,333	1,260	5,728	5,431	34,146	480,312
Irrigated by reservoirs	1,173	....	....	....	....	3,111	40,701
Totals	31,550	....	....	....	....	37,257	521,013

IRRIGATION DIVISION No. 2—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District No.	Superintendence	Repairs	Improvements
10	$ 7,600.00	$ 6,455.00	$ 2,600.00
11		3,560.00	
12			
13		646.50	
14	22,809.00	97,680.00	20,198.00
15			8,730.00
16	34,011.59		
17	42,850.00	27,680.00	30,197.00
18			
19	29,429.00		
49			
66			
67	12,916.00	33,095.00	21,902.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORTS FOR THE IRRIGATION SEASON 1922.

District No.	Number of Reservoirs Reported	Area High Water Line (Acres)	Capacity Reservoirs In Acre-Ft.	Quantity Water in Reservoirs May 1, 1922	Quantity Water in Reservoirs Nov. 1, 1922 Acre-Ft
10	21		12,321	11,652	1,184
11			81,278	74,075	20,209
12	15		15,513	7,376	4,678
13	1		59	59	
14	7		13,542	26 000	3,072
15	4		8,178	4,531	6,426
16	41		49,602	10,250	Not given
17	53	31,509	486,641	153,338	8,818
18	1		72,600	529	
19	12		26,386	4,250	3,500
49	First Water Commissioner for this district appointed in July, 1922, but has not put in any time.				
66			No Commissioner.		
67	1		39,845	6,320	1,357
Totals	156		806,967	313,381	49,244

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORTS FOR THE IRRIGATION SEASON 1922.

District No.	Alfalfa	Natural grasses	Cereals	Orchards	Market gardens	Potatoes	Sugar beets	Other crops	Total irrigated
10	2,953	730	746	244	59		81	1,471	12,574
11									
12	275		260	116					651
13		160							
14	100		5					200	
15	100	190	447						737
16	4,976	600	2,678	431	50	1,730	122	330	10,939
17	1,075	160	3,000			40	895		4,935
18									
19	5,200		820				75	860	6,955
49									
66									
67	1,100		2,500			40		250	3,890
Totals	15,779	1,840	10,396	791	109	1,810	1,173	3,111	40,701

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION NO. 3, 1921

Alamosa, Colorado, November 30, 1921.

HON. ADDISON J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: I have the pleasure of handing you herewith my annual report of ditches and reservoirs for the fiscal year ending November 30, 1921, for Irrigation Division No. 3, comprising Water Districts Nos. 20, 21, 22, 24, 25, 26, 27 and 35, in the San Luis Valley, covering all of the drainage of the Rio Grande Del Norte and its tributaries.

Owing to the heavy snowfall in the mountains last winter, the supply of water for irrigation during the season has been sufficient.

Considerable damage was done to lands lying along the Rio Grande by floods, during the high water last June, and I would suggest that if a flood prevention bill is introduced in the next legislature, that it be drawn so that it would include the Rio Grande also.

Respectfully,
(Signed) E. S. COUNSELOR,
Irrigation Division Engineer,
Irrigation Division No. 3.

IRRIGATION DIVISION No. 3

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

District Number	Number of Priorities Reported	Amount of Appropriations in Sec. Ft. Reported	Length of Main Ditches in Miles	Length of Laterals in Miles
20	386	5.935.9	536.75	1,028.25
21	82	1.319.58	694.09	No Report on Laterals
22	188	2.872.72	247.25	No Report
24	64	305.00	73.36	No Report
25	129	514.30	120.00	89.00
26	189	594.25	No Report	No Report
27	32	65.50	39.00	12.75
35	48	549.48	147.32	169.50
Totals	1,112	12,161.73	1,857.77	1,299.50

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

District Number	First Day Water Diverted from Natural Streams for Irrigation	Last Day Water Diverted from Nat. Streams for Irrigation	Max. No. Days Water Diverted from Natural Streams for Irrigation	Max. No. Days Water carried from Reservoirs
20	April 1st	November 1st	210	No Report
21	April 1st	October 15th	195	186
22	May 1st	November 15th	194	No Report
24	April 1st	November 5th	215	136
25	April 17th	October 22nd	186	No Report
26	April 1st	November 15th	225	No Report
27	April 1st	November 15th	225	No Report
35	April 1st	November 1st	225	155
Totals			225	186

IRRIGATION DIVISION NO. 3—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

District Number	Amt. of Water carried from Reservoirs Acre Feet	Average Daily Amt. of Water diverted by Ditches during Season from Nat. Streams for Irrigation, Second Feet	No. of Ac. Ft. diverted by Ditches during Season from Nat. Streams for Irrigation	Total No. Acres that can be Irrigated
20	No Report	1,921.40	642,825	325,975.50
21	20,280	444.50	69,295	72,443.00
22	No Report	499.00	131,548	103,900.00
24	27,931	239.38	61,075.50	No Report
25	....	37.10	13,839.80	71,600.00
26	....	419.49	89,490.27	39,057.00
27	....	69.15	No Report	6,320.00
35	5,128	275.35	48,351.00	65,275.00
Totals	53,339	3,905.37	1,056,424.57	684,570.50

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

District No.	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens	Potatoes	Peas
20	42,275	66,669	54,992	19.5	581	28,237	50,490
21	7,472	17,861	6,189	......	......	1,597	....
22	11,820	29,365	14,400	40.0	85	5,370	7,940
24	4,654	690	5,648	......	5	86.75	9,401
25	815	18,170	21,010	......	......	114	....
26	2,253	31,390	16,012	......	......	12	....
27	730	3,132	210	......	......	138	753
35	2,610	14,993	10,439	3	30	81	6.505
Totals	72,629	182,270	128,900	62.5	701	35,635.75	75,089

NOTE—Districts 21, 25 and 26 reported field peas under the heading of "Other Crops."

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1921

District No.	Other Crops	Total Irrigated in Acres	Cost of Superintendence	Repairs	Improvements
20	81,986	325,249.50	$61,097.20	$13,967.00	$14,158.68
21	6,739	39,858.00	No Report	No Report	No Report
22	20,400	89,420.00	No Report	No Report	No Report
24	1,862	22,346.75	No Report	No Report	No Report
25	500	40,609.00	No Report	No Report	No Report
26	3,390	53,057.00	3,000.00	No Report	No Report
27	137	5,100.00	No Report	No Report	No Report
35	6.141	40,802.00	6,217.00	15,126.00	....
Totals	121,155	616,442.25	$70,314.20	$29,093.00	$14,158.68

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION NO. 3, 1922

Alamosa, Colorado, December 1, 1922.

HON. ADDISON J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: I hand you herewith my annual report for the fiscal year ending November 30, 1922, on ditches and reservoirs in Irrigation Division No. 3, comprising the eight districts in the San Luis Valley, and covering the drainage basin of the Rio Grande Del Norte and its tributaries in the State of Colorado.

We have had a very hot and dry season and a very light run of water. There was very little rain, and in some districts none during the irrigation season.

The crop yield was below the average, and prices, especially for potatoes, were very low, running from 30 cents to about 75 cents per hundred. This low price was caused by the over-production of potatoes in the United States, and more especially by the shortage of cars. I am informed that in Rio Grande County, with over 30,000 acres planted in potatoes, that sixty per cent. of the crop is now in storage, with only thirty per cent. sold, and the remaining ten per cent. was not harvested for the reason that the prices offered did not justify digging them.

There are two new drainage ditches now under construction: the Morgan Ditch in Conejos County, covering 11,300 acres with an open ditch about 13 miles long and about 29 miles of laterals. The main ditch empties into the La Jara Creek, in the East half of Section 28, in Township 36 North, Range 10 East. The estimated cost per acre is $17.40.

The other district is the Bowen Drainage District of 15,440 acres, in the southern part of Rio Grande County, with a main canal of ten miles and one-half in length, which empties into the Rio Grande River about five miles west of the city of Alamosa, in the Northeast quarter of Section 25, Township 35 North, Range 9 East. The estimated cost of this project is not to exceed $12.40 per acre.

While I am on the subject of drainage, I wish to call attention to the steady increase of return water from irrigation, as shown by the increased flow of the different drainage ditches, and also from the La Jara Arroya, west of the town of La Jara, and Spring Creek south of the city of Monte Vista. I had occasion to examine the records in the office of the Clerk of the District Court of Conejos County relating to the adjudication of a water right granted to the Arroya Springs Ditch, which takes its water from the

La Jara. In this record, I find from the testimony given by Senator W. H. Adams, and the late Honorable D. E. Newcomb, that prior to 1889 and the building of the Mogote Ditch, which is on the west side of the Springs and above them, that there was no evidence of any springs; that after 1890, when water was turned into the Mogote Ditch from the Conejos River, these springs appeared, and ever since, as the land to the south, which is much higher, is being brought under irrigation, the flow of water from the springs has steadily increased. I find that the same conditions exist at the springs that are the source of Spring Creek, south of Monte Vista.

This season has shown the absolute necessity for more storage reservoirs in this division. The Conejos Reservoir, as shown by the Jacobs filing, with a capacity of 100,000 acre feet on the Conejos River, should be built at once, and there should be more storage upon the Rio Grande above Creede. The Beaver Creek dam should be repaired so that it would hold water. Just before my inspection of this dam, as I am informed by Mr. Carr, the Water Commissioner, the gates were shut down when the water stood at a gage height of sixty feet, and within thirty days, water fell to a gage height of thirty feet. This water does not seem to leak through the dam proper, but through the mountain at the left of the dam. I hope something can be done to remedy this, for the district needs this water badly.

The most serious problem that faces the entire valley, at this time, is the building of a dam in the canon of the Rio Grande, in Section 33, Township 33 North, Range 11 East, by the Reclamation Service. I am informed that the plan is for a dam 150 feet high, which will back water up the river a distance of 21 miles. If this project is completed, it will take all of the flood waters of the entire Rio Grande drainage, and there will be no chance for the future storage of water for use in the San Luis Valley. The most serious thing about the building of this dam, in my opinion, is the defeat and obstruction of our different drainage projects, for if the reservoir is filled, the water will cover the lower Conejos, La Jara, and Alamosa Creeks, and the outlets of several of our drainage ditches.

In conclusion, I wish to express my appreciation of the hearty co-operation of Hydrographer Dan S. Jones, Jr., and the different water commissioners of this Division, also the water users of the entire Division. They have been loyal, helpful, and always willing to do their utmost toward an extended use of water.

Respectfully submitted,

(Signed) E. S. COUNSELOR,
Irrigation Division Engineer,
Division No. 3.

IRRIGATION DIVISION NO. 3—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District Number	Number of Priorities Reported	Amount of Appropriations in Sec. Ft. Reported	Length of Main Ditches in Miles	Length of Laterals in Miles
20	388	28,953.20	547.75	1,031.00
21	85	6,418.38	275.95	No Report
22	187	5,619.38	216.00	No Report
24	64	1,621.06	143.61	No Report
25	130	513.24	No Report	149.00
26	132	558.71	54.27	20.89
27	29	549.25	148.40	90.60
35	67	....	....	....
Totals	1,082	44,233.22	1,385.98	1,291.49

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District Number	First Day Water Diverted from Natural Streams for Irrigation	Last Day Water Diverted from Nat. Streams for Irrigation	Max. No. Days Water Diverted from Natural Streams for Irrigation	Max. No. Days Water carried from Reservoirs
20	April 1st	November 1st	215	.....
21	April 1st	November 1st	215	234
22	May 1st	November 15th	199	No Report
24	April 2nd	October 31st	213	115
25	April 20th	August 15th	117	.....
26	April 1st	November 15th	230	.....
27	April 1st	November 15th	235	.....
35	April 1st	November 1st	215	215

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

District Number	Amt. of Water carried from Reservoirs Acre Feet	Daily Average Amt. of Water diverted by Ditches during Season from Nat. Streams for Irrigation,	No. of Ac. Ft. diverted by Ditches during Season from Nat. Streams for Irrigation	Total No. Acres that can be Irrigated
20	....	2,043.80	5,813.23	342,148.00
21	No Report	1,440.70	No Report	67,545.00
22	37,145.00	613.00	158,958.60	98,870.00
24	....	115.13	38,956.00	No Report
25	....	92.00	1,732.00	69,100.00
26	....	278.95	43,132.40	36,090.00
27	....	20.00	6,600.00	7,648.00
35	9,857.40	238.75	42,125.00	576.25
Totals		4,751.25	872,825.80	679,026.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922

CROPS IRRIGATED FROM CANALS IN ACRES

District Number	Alfalfa	Natural Grasses	Cereals	Orchards
20	40,216.00	123,356.00	47,734.00	34
21	8,683.50	17,370.00	6,534.50	No Report
22	9,030.00	320.35	20,290.00	40
24	3,699.00	No Report	1,300.00	No Report
25	1,815.00	16,770.00	1,870.00	....
26	2,313.00	29,090.00	1,107.00	....
27	631.00	5,050.00	....	....
35	2,985.00	10,590.00	5,417.00	3
Totals	69,372.50	234,261.00	84,252.50	77

IRRIGATION DIVISION NO. 3—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922 CROPS IRRIGATED FROM CANALS IN ACRES

District Number	Market Gardens	Potatoes	Peas	Other Crops	Total Irrigated
20	548.00	35,298.00	55,824.00	39,138.00	342,148.00
21	No Report	2,463.00	6,536.00	608.25	42,196.00
22	255.00	7,300.00	10,110.00	20,210.00	99,270.00
24	74.00	232.00	....	12,599.00	17,904.00
25	....	240.00	....	340.00	21,035.00
26	....	12.00	....	2,605.00	35,127.00
27	....	256.00	449.00	354.00	6,740.00
35	36.00	647.00	3,892.00	779.00	24,349.00
Totals	913.00	46,448.00	76,811.00	76,633.25	588,769.00

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR THE IRRIGATION SEASON OF 1922 COST IN DOLLARS

District Number	Superintendence	Repairs	Improvements
20	$ 32,103.06	$ 20,764.74	$ 6,550.61
21	No Report	No Report	No Report
22	No Report	No Report	No Report
24	No Report	No Report	No Report
25	No Report	No Report	No Report
26	No Report	No Report	No Report
27	No Report	1,016.15	No Report
35	....	685.00	50.00
Totals	$ 32,103.06	$ 22,465.89	$ 6,600.61

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION No. 4, 1921

Montrose, Colo., November 30, 1921.

MR. A. J. McCUNE,
State Engineer,
Denver, Colo.

Dear Sir: In compliance with the statutes, I herewith submit my annual report for the fiscal year ending November 30, 1921.

So far as water for irrigation purposes is concerned, it was an exceedingly good season, as all parts of the Division were generally well supplied with water. High water in June did considerable damage in the Uncompahgre and Gunnison Valleys—especially was this true in the Uncompahgre Valley, where a large force of men was called out to assist in trying to keep the Uncompahgre River within its banks. The U. S. R. S. lost several headgates and dams, and some of their ditches were left high and dry by the river changing its channel. We were fortunate in not losing a single reservoir, though several were endangered by the excessive amount of water.

Crops were generally good, though market prices were very low. This was especially true of hay, cereals and potatoes. Fruit prices were very good.

Very little development work was done in this Division during the past year. About $10,000.00 was spent in enlarging the intake ditch of the Buckeye Reservoir, which is located in Western Montrose County. Some work was done on reservoirs in Montezuma County.

In regard to the new law regulating the pay of Water Commissioners, but one district, No. 40, has thus far been able to qualify under the first class. Districts Nos. 33, 40, 41 ad 61 are fairly well supplied with headgates and measuring devices, but there is great need for headgates, rating flumes and weirs in Districts 28, 29, 30, 31, 32, 34, 59, 60, 62, 68 and 69.

The only dispute of any importance over water was a question of water-shed between the Mesa Ditch & Reservoir Co. and the Coon Creek Reservoir Co., and this was finally settled in the District Court of the 7th Judicial District.

An extra effort was made by the Division Engineer to get as complete a report as possible, and while the report herewith submitted is not perfect in any sense, it is the best that it has been possible to obtain under the circumstances. This Division comprises 15 counties, in whole or in part, and it is very difficult to reach some portions of the Division, as they are isolated by mountain ranges and the expense of reaching all portions of the Division is very great.

In an effort to assist the water commissioners with their work in getting complete reports, and in the distribution of water, the Division Engineer traveled, during the season, about 8,000 miles. Most of this traveling was done by auto.

There are two important reclamation projects in this Division. One, known as the Uncompahgre Valley Project, which diverts water from the Gunnison River into the Uncompahgre Valley, and the other known as the Grand Valley Project. Through the courtesy of the project managers I am able to give the reports on these two projects for the past year.

UNCOMPAHGRE PROJECT

L. J. Foster, Manager

The Uncompahgre Valley Project of the United States Reclamation Service was operated during the season of 1921 on a rental basis under contract with the Water User's Association.

No figures are available at the present time as to the acreage cultivated, but it is estimated that approximately 70,000 acres of the 100,000 acres susceptible to irrigation were irrigated.

No particular difficulties were experienced during the season in the operation of the four hundred and fifty odd miles of canals and laterals embraced in the project, other than those encountered at the time of the flood in the Uncompahgre River during the month of June.

At this time, much expense was incurred by the project in maintaining intact the six main canal headworks that divert at various points in the valley from the Uncompahgre River. Owing to breaks at this time in the West Canal main line, this system was out of commission for a period of about 10 days. The Selig Canal system was without a full head for a period of about five days owing to the failure of the protective piling on the upper end of the diversion dam.

The Gunnison Tunnel and the South Canal was operated continuously from June 22 until November 1. This was the longest continuous run experienced during the history of the project.

The supply of irrigation water available from the Gunnison and Uncompahgre Rivers during the season was more than sufficient for all project needs.

Very little construction work was accomplished on the project during the past calendar year, and such work as was done consisted principally in the building of new laterals, the extension of several of the old laterals, and the taking over by the project of several laterals operated in a co-operative way by farmers.

The damage to other properties, as wrought by the June flood in the Uncompahgre River, was as follows:

The Denver and Rio Grande Railroad track which parallels the Uncompahgre River throughout the entire valley was washed out, owing to changes in the river channel at four different places.

Much damage was done to all county bridges. In some places the river left its old channel and the bridges are now high and dry. In some cases, the bridges collapsed entirely, and in still others, although the bridges are intact, the abutments have been undermined.

The river was on a rampage along its entire length, and it is believed that not a single bottom-land ranch escaped damage. The movement of gravel was so great that in spite of the fact that the river has now subsided to a normal flow, much damage in cutting is still in progress on the bottom-land ranches.

Much damage was also done to many of the private headgates that divert water from the river for use on the bottom lands. The Ouray, Stark-Volkman, Eagle, and Frost Ditches were in a precarious condition during the flood period. The headgate of the Foster Ditch was left on the opposite side of the river. The Homestake Ditch was washed out and lodged up against the Olathe Bridge. Changes in the river channel left the headgates of the Swanson, Boles-Manney and Uncompahgre No. 3 ditches high and dry and away from the new river channel.

THE GRAND VALLEY PROJECT

S. O. Harper, Manager

The Grand Valley Project of the U. S. Reclamation Service is located in Mesa County, near the western boundary of Colorado. The irrigation plan of the project provides for the diversion of water from the Colorado River by means of a diversion dam located about 8 miles northeast of Palisade, into a canal system on the north side of the river, for the irrigation of 50,000 acres of land lying north and west of Grand Junction, Fruita and Mack. About 40,000 acres will be supplied by gravity, and 10,000 acres by electrically operated pumping plants to be located on the main canal. The diversion dam, the first 55 miles of main canal, and the lateral system to serve 30,000 acres of land under the gravity canal, have been completed. A pumping plant and other works have been constructed to supply the 8,400 acres of land in the Palisade and Mesa County Irrigation districts, in addition to the project area.

Good progress is being made in the settlement and development of the project, and the area under irrigation has increased from 1,740 acres in 1916, when water was first made available, to over 13,000 acres in the season of 1921.

Approximately 22,000 acres are now included in the farms which are being irrigated in whole or in part. There still remains about 8,000 acres of land available for settlement, practically all of which is held in private ownership.

All of the desirable government lands have been taken up, and the only way to secure a farm under the project at the present time is to purchase either deeded land or relinquishment from the present owner. The lands under the project are still held at very reasonable prices, and excellent opportunities are offered for new settlers desiring to locate in the Grand Valley.

The value of the crops produced on the project in each of the past six seasons is as follows:

Year	Total Crop Value	Per Acre
1916	$ 54,700	$35
1917	199,000	44
1918	414,300	65
1919	570,600	64
1920	525,400	49
1921 (est.)	500,000	40
Total	$2,264,000	

The lower values for the past two seasons are due to the falling prices of practically all farm products. The season of 1921 was a very favorable one for nearly all crops, and the yields were the best in the history of the project, which helped to offset the unsatisfactory prices. Yields of wheat of from 40 to 50 bushels per acre were common, and sugar beets in many cases produced over 20 tons per acre.

The estimated value of land and improvements on the 370 farms now under cultivation is $1,300,000; the value of the stock and equipment is $325,000, and the population on the project is more than 1,000. Good progress has been made in the improvement of roads, and nearly all of the farms are now provided with good roads to the nearest towns and schools. The project now boasts of four school houses and one community club house, in addition to the facilities of this kind which are available in parts of the lower valley adjoining the project.

An important feature of the work in connection with the project, which has been completed during the past year, is a system of outlet drains constructed through the Grand Valley Drainage District under a co-operative contract with that district. These drains provide outlets to carry the waste and seepage water from the project to the river, and will also assist in reclaiming the waterlogged lands in the district.

A form of contract providing for the undertaking of this work has been approved by the Secretary of the Interior, and will be submitted to the landowners for ratification at an early date.

Attached to this report is the tabulated report of the Water Commissioners.

Yours very truly,
(Signed) H. C. GETTY,
Irrigation Division Engineer,
Irrigation Division No. 4.

IRRIGATION DIVISION No. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR 1921

District Number	Ditches Reported	No. of Priorities	Amount of Appro. Cu. Ft. Per Sec.	Capacity of Canals and Ditches Cu. Ft. Per Sec.	Length of Canals or Ditches in Miles	Length of Laterals Miles
28	202	254	584	8,553	276	Not given
29	165	220	530	Not given	294	Not given
30	164	124	410	669	253	Not given
33	44	39	630	384	109	122.5
34	68	51	1,476	1,886	149	151
40	346	300	2,138	2,995	855	Not given
41	50	49	2,067	3,392	317.5	544
42	280	240	324	919*	472*	489*
59	176	176	790	3,784	573	42*
60	113	111	362	640	293	66*
61	30	16	9	128	54	Not given
62	64	71	375	Not given	135	Not given
68	117	104	541	686	227	Not given
Totals	1,819	1,755	10,236	24,036	4,007.5	

*Only partially given.

IRRIGATION DIVISION No. 4—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR 1921

No. of District	First Day Water Was Used	Last Day Water Was Used	Average No. Days Water Was Used	Average Daily Amt. in Sec. Ft.	No. Acre Feet Used
28	April 15	Sept. 1	106	686	145,432
29	May 1	Oct. 31	90	260	46,800
30	April 1	Oct. 31	107	443	94,802
33	May 1	Sept. 30	65	165	21,450
34	April 15	Oct. 1	116	982	227,824
40	April 1	Sept. 30	126	1,774	447,048
41	March 15	Oct. 31	166	1,813	601,750
42	April 1	Nov. 1	138	1,816	501,206
59	May 1	Oct. 31	78	776	121,056
60	April 1	Nov. 15	83	365	60.590
61	March 1	Nov. 15	117	23	4.242
62	April 1	Oct. 1	102	335	68,340
68	April 10	Nov. 15	128	523	133,888
Totals			110	9,961	2,474,428

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR 1921

No. of District	Number Acres Can be Irrigated	Alfalfa	Natural Grasses	Cereals	Orchard	Market Gardening
28	50,000	266	33,047	282	....	....
29	44,651	5,664	5,574	2,475	707	20
30	55,904	11,332	5,864	8,012	484	72
33	63,773	10,267	....	9,186	90	....
34	284,325	31,240	2,030	33,536	5.264	17
40	259,017	74,954	29,794	30,412	16,831	1,418
41	141,850	37,665	1,190	35,715	4,517	1,426
42	200,000	37.259	12,747	9,296	7,687	676
59	30,670	1,127	22,736	253	....	....
60	107,268	11,167	2,047	7,753	483	248
61	38,000	1,911	117	803	26	14
62	31,911	73	9,088	650	....	3
68	58,928	3,702	3,586	3,000	56	73
Totals	1,326,297	226,627	127,820	141,373	36,145	3,967

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORTS FOR 1921

No. of District	Potatoes	Sugar Beets	Other Crops	Total Acres Irrigated	Supt.	Repairs	Improvements
28	70	....	....	33,665	$ 100	$	$ 17
29	14	....	14,971	29,426	275	4,657	....
30	466	34	72	26,326	3,930	14,110	4,220
33	235	....	495	20,273	725	955	680
34	448	7	10,870	83,412	1,975	685	1,020
40	6,621	5,002	8,874	173,906	....	....	....
41	20,220	3,080	3,840	107,603	36,200	43,180	44.710
42	676	1,640	16,192	85,902	39,126	162.883	26,062
59	65	....	2	24,182	115	4,608	1,000
60	309	....	2.561	24,568	3,000	18,145	550
61	2	....	187	3.060	500	1,550	400
62	54	....	....	9,868	....	3,170	....
68	421	....	7,217	18,055	36	6,912	395
Totals	29,601	9,753	65.281	640,246	$85,982	$260,855	$79,054

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORT FOR 1921

No. of District	No. of Reservoirs	Area High Water Line in Acres	Quantity of Water in Reservoir May 1, in Cut. Ft.	Quantity of Water in Reservoir Nov. 1 Cu. Ft.
29	2	Not given	20,152,162	5,736,370
30	2	60	5,000,000	5,000.000
34	4	740	458,780	45,000
40	96	3,281	17,516,166,224	107,308,800
42	54	Not given	Not given	Not given
60	3	Not given	105,000,000	Empty

No. of District	Capacity in Cut. Ft.	No. of Acre Feet Used During Season
29	20,152,162	138
30	62,319,975	850
34	4,519,340	15,940
40	1,751,616,224	36,865
42	Not given in full	9,337
60	220,686,698	5,300

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, IRRIGATION DIVISION NO. 4, 1922.

Montrose, Colo., November 28, 1922.

MR. A. J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: As provided by statute, I am herewith submitting my annual report of Irrigation Division No. 4, for the fiscal year ending November 30, 1922.

The season of 1922 was exceedingly dry; the snowfall in portions of the division being very light. There was very little rain during the summer months, and water was very scarce in certain portions of the division. This was especially true of the Mancos, La Plata and Florida Valleys in the southwestern part of the state, and also of the Cochetopa and Tomichi Valleys in Saguache and Gunnison Counties. In Montrose County, the Uncompahgre Valley Reclamation Project furnished an abundance of water from the Gunnison River, and the Reclamation Project in Mesa County amply supplied that region from the Colorado River. In Delta and Mesa Counties, a large number of reservoirs supplied a sufficient amount of water during the dry season.

The principal crops raised were alfalfa, cereals, fruit, potatoes, onions and sugar beets. The yield was exceedingly large, but the prices received by the producers were so low and the transportation facilities so inadequate that large portions of the fruit and potato crops were not harvested. Many carloads of peaches and apples were allowed to rot because cars were not available, and a large acreage of potatoes was left in the ground, because the low price did not justify digging them, and cars could not be secured to transport them to market. These conditions have resulted in a tremendous loss to the farmers, and leaves many of them in straightened financial circumstances. The hay market was very satisfactory, and the two sugar beet factories—one at

Delta and the other at Grand Junction—furnished a ready market for all of the sugar beets raised. The low price received for potatoes and other crops should result in an increased acreage of sugar beets in the future.

About the only dispute over irrigation matters was between the Mesa Lakes Reservoir Co. and the Coon Creek Ditch & Reservoir Co. The disagreement between these two companies was caused by the limited watershed. This dispute has been taken to the District Court, and a decree has been issued by the court with explicit directions relative to the filling of the various reservoirs owned by the two companies. It was necessary for us to make two trips to these reservoirs in the early spring, to oversee the filling and carry out the decree of the court.

During the season, this office inspected a number of the reservoirs in the division, and the following is a list of the reservoirs examined by us:

Trout Lake, Gurley and Cone Reservoirs, in San Miguel Co.

Bauer Lakes and Weber Reservoir, in Montezuma Co.

Mesa Lakes, Coon Creek and Big Creek Reservoirs, in Mesa Co.

Fruitland Mesa, Fruit Growers, Surface Creek Ditch and Reservoir Co., Youngs Creek Reservoir Co., Park, Bonita, Sackett, Cedar Mesa, Vella and Military Park, in Delta County.

Many of these reservoirs have been handled in a very careless manner. The dams have not been kept up to a proper grade, the spillways are more or less inadequate, and many of the headgates are bunglesome and hard to manipulate, and many of them are badly in need of rip-rapping. We have endeavored to have the owners of these reservoirs put them in proper condition, and as a result of this everlasting urging, we have had no reservoir losses for many years. The Surface Creek Ditch & Reservoir Co. spent about $5,000.00 this season, raising the dam on the Big Eggleston Lake on Grand Mesa; and some considerable work was done on the Ground Hog Reservoir in Dolores County. Our investigation shows that about $350,000.00 was spent during the season on improvements and repairs on the various ditches and reservoirs in this division. The greater part of this amount was spent by the two U. S. R. S. projects, and I am submitting herewith the reports of these two projects, made by the project managers:

THE GRAND VALLEY PROJECT

S. O. Harper, Manager

The Grand Valley Project is located in the plateau region on the western slope of the Rocky Mountains, in Mesa County, Colorado.

The preliminary surveys of the project were begun in September, 1902, but work was suspended for several years and construction was not authorized until September 23, 1912. Water was first turned into the main canal in 1915, and irrigation of the first unit was started with the season of 1916. Beginning with the season of 1919, water service has also been furnished through the project works to the 8,400 acres of land in the Palisade and Mesa County irrigation districts. An extension of the project is proposed to supply the Orchard Mesa Irrigation District, which includes 10,000 acres of land on the south side of the Colorado River.

The features of the project which have been completed include the Colorado River diversion dam, the first 55 miles of the main canal extending from the headworks to West Salt Creek, and laterals to supply 30,500 acres of the gravity unit of the project. A co-operative system of drains and outlets through the Grand Valley Drainage District has been completed, and several miles of drains have been constructed to reclaim the principal seeped areas on the project. The uncompleted features are the last 7 miles of the main canal, laterals to supply 5,000 acres of the gravity division, the power and pumping systems, drainage works which may be required in the future, and the reconstruction of the Orchard Mesa irrigation system.

CONSTRUCTION—CANAL AND LATERAL SYSTEMS

The only construction work accomplished on these features was the completion of small sub-laterals required to supply lands not previously farmed, together with the installation of the necessary minor structures required for making deliveries to new lands. Two thousand linear feet of new laterals were constructed, involving 800 cubic yards of excavation, and 306 minor wooden structures were installed.

CONSTRUCTION—DRAINAGE SYSTEM

The construction of drains to reclaim seeped areas on the project was continued during most of the year. The construction of the co-operative system of drains and outlets through the Grand Valley Drainage District under the terms of the contract dated November 22, 1917, was completed in September, 1921. Two dragline excavators were operated on the drainage work during the year, completing 4.3 miles of open drain, involving 135,000 cubic yards of excavation. Investigations were continued of the seeped areas in various portions of the project, and plans made to proceed with the work of reclaiming such lands as can be drained at a feasible cost. The estimated area damaged by seepage at this time is 600 acres, divided in small tracts scattered throughout the project.

ORCHARD MESA IRRIGATION DISTRICT

Arragements were completed during the year for the inclusion of this district as a unit of the Grand Valley project, and the rehabilitation of the irrigated system. On February 18, 1922, contract was entered into between the United States, the Grand Valley Water Users' Association, and the Orchard Mesa Irrigation District, providing for the expenditure of not to exceed $1,000,000 for the reconstruction of the irrigation system, construction of a drainage system, and settlement of the outstanding indebtedness. The liquidation of the indebtedness of the district was completed in September, and construction was started in October on concrete siphon to connect Orchard Mesa power canal with the main canal of the project. It is proposed to complete this siphon and also the reconstruction of about 1,000 linear feet of flume on the power canal before the irrigation season of 1923.

The estimated expenditures on the project for the calendar year 1922 were as follows:

Construction, Canal and Lateral Systems	$ 5,000
Construction, Drainage System	30,000
Operation and Maintenance	45,000
Orchard Mesa Irrigation District Payment to Bondholders	100,000
Reconstruction, Canal System	50,000
Total	$230,000

UNCOMPAHGRE PROJECT

L. J. Foster, Manager

The Uncompahgre Valley Project of the United States Reclamation Service was operated during the season, 1922, on a rental basis under contract with the Water Users' Association.

Public notice announcing a construction charge of $70 per acre for each acre of Class 1 land under the project was promulgated by the Secretary of the Interior on April 12, 1922. According to the terms of the public notice, the first installment of the construction charge, amounting to $1.40 per acre, becomes due on December 1, 1922, on approximately 80 per cent. of the Class 1 land under the project.

No unusual maintenance difficulties were experienced during the irrigation season in the operation of the 470 odd miles of canals and laterals embraced in the project, other than those experienced during the latter part of May and early part of June in maintaining the side hill section of the Montrose and Delta Canal, and during July, in repairing the washed-out floor and part of the concrete wall section in the flare section of the South Canal near Mile Post 6.

The Gunnison Tunnel and South Canal were operated continuously during the season, except for three shut-downs of short periods each.

The supply of irrigation water available for the Gunnison and Uncompahgre Rivers was not sufficient for the full project demand for a period of from two to three weeks during the latter part of July and early part of August, and as a result, it was necessary to rotate somewhat during the period.

Very little construction work was accomplished on the project during the past calendar year, and such work as was done consisted principally of the building of new laterals, the extension of several of the old laterals, and the taking over by the project of several laterals operated in a co-operative way by farmers.

In conclusion, may we state that, in the discharge of our official duties as Irrigation Division Engineer, it was necessary for us to travel by auto about 10,000 miles, in addition to several hundred miles of travel by rail. Our expense for the season was about $1,500.00.

I would like to suggest that there should be better co-operation between the hydrographers who work in the division, and the Division Engineer, and that a copy of all measurements, rating curves, and discharge tables be filed in the office of the Division. Mr. R. I. Meeker, Special Deputy State Engineer, requested a daily report from this office of the discharge of San Miguel, Dolores and other streams, during certain months, but we were unable to furnish him the necessary data for the reason that no record of these things had been filed in this office, as no measurement of any kind made by hydrographers has been filed in this office since March 15, 1921. And we propose that some remedial legislation along these lines be enacted by the next General Assembly.

Attached hereto is a tabulated statement of the Water Commissioners' Annual Ditch and Reservoir Reports.

Respectfully submitted,
(Signed) H. C. GETTY,
Irrigation Division Engineer,
Division No. 4.

IRRIGATION DIVISION No. 4

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

No. of District	Ditches Reported	No. of Priorities	Amount of Appro. Cu. Ft. per Sec.	Capacity of Canals & Ditches Cu. Ft. per Sec.
28	262	264	557	3,070
30	163	127	449	687
33	37	37	657	409
34	60	43	1,005	1,545
40	345	475	2,005	3,201
41	51	35	2,010	3,513
42	279	268	4,919	5,598
59	177	226	804	3,766
61	18	16	1,047	72
68	116	98	489	1,300
Totals	1,508	1,589	13,942	23,161

IRRIGATION DIVISION No. 4—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

No. of District	Length of Canals & Ditches in Miles	Length of Laterals Miles	First Day Water Was Used	Last Day Water Was Used
28	261	Not given	April 15	Sept. 1
30	240	Not given	April 1	Nov. 1
33	111	149	May 8	Sept. 20
34	133	180	July 7	Sept. 1
40	838	85*	April 15	Oct. 20
41	379	607*	April 1	Nov. 1
42	557	553*	March 10	Nov.15
59	216	Not given	April 25	Aug. 20
61	32	9*	March 1	Nov. 15
68	390	Not given	April 1	Nov. 15
Totals	3,157	1,583		

*Only partially given.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

No. of District	Average No. Days Water Was Used	Average Daily Amount in Sec. Ft.	No. Acre-Feet Used	No. Acres Can be Irrigated
28	82	575	114,013	34,945
30	108	406	128,953	55,834
33	57	182	27,450	63,773
34	45	829	97,260	92,335
40	135	1,490	540,547	252,614
41	174	1,400	781,224	100,283
42	133	1,868	639,013	195,469
59	78	3,592	64,122	29,822
61	160	17.4	5,112	10,590
68	118	430	126,742	34,439
Totals	101,090	10,789.4	2,524,436	870,014
	109			

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

Number District	Alfalfa	Natural and Other Grasses	Cereals	Orchards
28	270	33,531	230	....
30	11,683	5,906	7,604	521
33	10,120	....	7,830	125
34	30,705	4,628	33,087	5,181
40	72,750	30,364	29,360	16,620
41	17,460	2,270	42,915	7,784
42	48,417	9,065	8,406	11,575
59	1,644	22,664	150	....
61	1,492	116	681	17.5
68	4,118	10,677	2,995	54
Totals	198,659	119,221	132,258	41,877.5

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

No. of District	Market Gardening	Potatoes	Sugar Beets	Other Crops
28	70	76	....	....
30	79	477	2	20
33	....	303	50	425
34	....	648	....	1,722
40	1,150	6,749	2,519	10,188
41	4,056	26,325	2,115	10,940
42	192	1,563	1,001	17,064
59	....	78	....	22
61	14	....	....	263
68	47	800	....	....
Totals	5,608	37,019	5,687	40,644

IRRIGATION DIVISION No. 4—Continued

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL DITCH REPORT FOR 1922

No. of District	Total Acres Irrigated	Superintendence	Repairs	Improvements
28	34,178	Not given	Not given	Not given
30	26,302	3,855	9,271	2,890
33	18,833	1,200		400
34	84,761		3,251	205
40	168,700	12,635	67,050	4,447
41	113,865	44,175	38,190	14,500
42	97,281	39,307	151,420	23,911
59	24,558	705	2,395	Not given
61	2,583.5	855	1,155	75
68	33,816	105	6,414	721
Totals	604,877.5	102,837	279,146	47,149

No reports from Districts Nos. 29, 31, 32, 60, 62, 63, 69.

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORT FOR 1922

No. of District	No. in District	Area of High Water Line, Acres	Capacity in Cubic Feet	Quantity of Water in Reservoir May 1
30	2	120	62,319,975	25,000,000
34	6	920	785,673,400	785,673,400
40	93	3,248	1,761,190,620	761,190,620
42	55			
61	1	300	200,000,000	100,000,000

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORT FOR 1922

No. of District	Quantity of Water in Reservoir Nov. 1, Cu. Ft.	First Day Water Was Used	Last Day Water Was Used	Ave. No. Days Water Was Used
30	1,000,000	May 1	Aug. 10	43
34	21,700	May 1	Nov. 1	132
40	65,838,340	June 28	Sept. 30	42
42		July 1	Oct. 6	40
61	10,454,400	May 5	Sept 1	117

TABULATED STATEMENT OF WATER COMMISSIONERS' ANNUAL RESERVOIR REPORT FOR 1922

No. of District	Average Daily Amt. in Sec. Ft.	No. Acre-Feet Carried	Superintendence	Repairs	Improvements
30	29.5	2,569	650	2,000	10,000
34	52.75	14,265	1,250	550	
40	338.5	38,936	5,829	2,600	4,000
42	107	10,605			
61	32.5	7,608	360	100	10

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, IRRIGATION DIVISION NO. 5, 1921

Glenwood Springs, Colo., November 30, 1921.

HON. ADDISON J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: In compliance with the provisions of the law, I herewith submit my annual report as Irrigation Division Engineer for Irrigation Division No. 5, for the fiscal year ending November 30, 1921.

From the standpoint of water supply, and the successful and efficient distribution of the same, the past year has been one of the most successful in my experience as an irrigation officer. However, the general conditions in the territory have not been as favorable as could be desired, owing principally to the unsettled financial conditions resulting in little or no demand for farm crops, and what little demand there was being at prices out of proportion to the cost of production. This unusual and abnormal condition has proved an especially hard blow to the live stock industry throughout the division, and has had a most discouraging influence upon the stockmen and farmers.

Despite the above mentioned discouraging conditions as to markets, I believe the farmers are well satisfied with the irrigation conditions which have prevailed during the season of 1921, and when I say I am well pleased with the work of the year, it is to compliment the men who have served so faithfully as water commissioners and deputies and upon whom I have had to depend to give the people service. I am sure that during all my experience in the work, I have never had less complaint against the service.

Perhaps the greatest complaint that has reached me has come from county commissioners in regard to the expense of administration, and this criticism has been made against only one official, and I must admit that I believe personally the county commissioners are justified in their contention, and have so informed the offending party, and unless his bills are more reasonable in the future, I will either feel obliged to withhold my approval of the same, an action I very much regret to take, or else the county commissioners, so they say, will disallow the bills. This is a case wherein a deputy, operating only on one small stream, has, during some months, charged for more days than has the Commissioner, whose activities extend over the whole district. Although the Water Commissioner and I have both taken the matter up with the deputy, our advice seems to have been unheeded, and our remedy now seems to lie in the use of greater care in the approval of his bills. I think this is the only instance where complaint has reached me of any of the men in the service.

A rather unusual condition has arisen in District No. 38, where a number of ranchmen along the Crystal River, claiming that the ratio of water allotted in the decrees by the District Court, viz., one second foot to each 50 acres of land, is inadequate to their needs, are seeking to have this ratio increased by decretal order. The water supply in the stream is abundant, and these people have never yet been restricted to their decreed amounts, because there was no demand by others for the undecreed water; but owing to the proximity of gravel to the surface of the soil, I am sure that the customary ratio of water to acreage is inadequate to their needs; but of course this is a matter for the court to decide, and, as I see it, a question that does not properly come before the irrigation officials.

Because of the above question and others that are liable to arise, we should do more stream gauging than we have been doing, so that when called upon in such cases, we could furnish accurate and reliable information in regard to stream flow. Mr. Bailey, of your office, visited with me some of the districts in my division the past summer, and we established stations on Rifle Creek, Divide Creek and Cattle Creek. The gauge on Rifle Creek was placed on the log pier of a newly built bridge, and only a few days afterwards a freshet swept both bridge and scale down the stream.

Yours very truly,

(Signed) A. J. DICKSON,
Irrigation Division Engineer,
Irrigation Division No. 5.

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION NO. 5, 1922

Glenwood Springs, Colo., November 25, 1922.

HON. ADDISON J. McCUNE,
State Engineer,

Denver, Colorado.

Dear Sir: In submitting my annual report at this season of the year, I do so with a real feeling of Thanksgiving for a degree of health that has made the work of the year a real pleasure, and permits me to meet with you at this time, and with a sense of gratitude for the aid and co-operation which have come to me from your office during the past year.

While the snowfall of last winter was nearly or quite normal, and the natural waterflow averaged very well with other years, climatic conditions were unfavorable, the result being a diminished yield of crops throughout the territory. This was more or less true of irrigated crops, and it was especially true in those areas where "dry farming" was attempted, or, to put it in another way, I may say that unirrigated crops were almost a total failure throughout the division, while the irrigated crops returned a smaller yield than usual.

There was practically no rainfall during the growing period of the summer, and the weather was especially dry and hot during July and August, and, although the ground drank up the water at a very rapid rate, it seemed to have very little refreshing and growing influence on the crops. The result was a smaller yield of grain, alfalfa and potatoes—the staple crops on which this territory so greatly depends.

Not only were these and other crops less productive this year than usual, but, owing to the intense heat and drought, the range conditions were greatly impaired, and live stock in the high areas did not show the gain during the season that has been common in other years. Because of the smaller crop yields than usual, the poor prices and the abominable transportation service, our farmers do not feel at all encouraged this year.

A new industry was given a trial this year in several sections of the division, that being the culture of head lettuce, and the experiment for the most part was unsatisfactory and disappointing. Apparently the lack of success with this new crop was largely due to a lack of knowledge on the part of the farmers of the best methods to pursue in the culture of the crop, some planting too early and others too late. Some irrigated too much and a few irrigated too little, and practically all the growers could have improved their crops by more cultivation. The loss was so heavy from slime, "seeders," and sun scald, and the culling insisted on by the inspectors was so severe that only a small portion of the crop grown found its way to market, that the growers received very little per acre for their crop, and it is my opinion that only a comparative few will care to experiment further with this new crop, which, however, has yielded good money to some growers.

I undertook to have a meeting, at the beginning of the season, of all water commissioners and deputies in the division, and, although I sent out notices to all interested over ten days in advance of the date of the meeting, on May 2nd, I afterwards received word from two commissioners located on the Moffat road, saying they received their notices the morning of the day the meeting was held—perhaps another argument in favor of the Moffat tunnel and improved service on that new line. However, seven of the men were present, and all felt that the day was pleasantly and profitably spent, and that, through the exchange of ideas and the suggestion of greater uniformity of methods, the service would be very much stimulated and strengthened.

I have done more this fall than ever before by way of reservoir inspection, but because of starting this work rather late in the season, I was not able to make as many inspections as I had expected, and as these reservoirs are all situated in high areas, I will not be able to do anything further along this line of work until next year.

Owing to the scarcity of labor during the past few years and the high wages demanded where labor was available, there has been no irrigation construction of any consequence in my division, and in view of the present rather gloomy outlook for the live stock and farming industry, I do not anticipate much development along that line for several years to come.

Respectfully submitted,

(Signed) A. J. DICKSON,
Irrigation Division Engineer,
Irrigation Division No. 5.

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION NO. 6, 1921

Steamboat Springs, Colorado.

HON. A. J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: I have the pleasure of presenting herewith for your consideration my annual report on conditions as they exist, recommendations for the future, and all business and official acts for the season past in Irrigation Division No. 6, together with tabulated statements of the water commissioners, ditch and reservoir reports comprising all ditches and reservoirs in this division.

Upon taking over this office and making a careful study of the situation in regard to the inefficient and careless methods practiced by the water users of this division, the poor condition of the headgates, irrigation systems, and ditches in general, and what appears to be a lack of interest and harmony among the water users, I came to the conclusion that there was a general misunderstanding, or, I might say, unfamiliarity, on the party of the water user or ditch owner with the irrigation laws of the state, together with the lack of knowledge of the value and handling of water. Therefore, to gradually overcome this situation, the Division Engineer, during the winter of 1921, wrote several articles explaining the irrigation laws of the state, the advantage derived by applying these laws in practice, and covered irrigation in general. These articles were published at intervals by a couple of the leading papers in the division. The following subjects were used: (1) Data regarding stream flow, protection to ditch owners. (2) Duty of water, and misleading terms relative to irrigation. (3) Farm weirs for measuring water, their construction and use. (4) Wide difference in water terms, dealing with adjudications and appropriations. (5) Unit of measurement for irrigation water, how determined, and why. (6) Duty of owner of ditches. (7) Construction and use of headgates. * * *

Five hundred headgate construction notices were printed and distributed among the several water commissioners, with instructions to serve same on the ditch owners where necessary. A copy of this notice is attached to this report, with paragraph of the law concerning the construction of headgates printed on the back of the notice. * * *

Five headgates of considerable importance were constructed during the season voluntarily by the ditch owners. These were all constructed to replace old dilapidated headgates. Several small ditches were built, but otherwise no new irrigation work was constructed during the season.

Instructions were sent to the water commissioners from this office before the irrigation season commenced. A copy of the same is attached hereto. These instructions, together with the circular letter sent from your office (May 18th) asking the division engineers and water commissioners to make special effort to secure careful and complete records of water diverted and used by both ditches and reservoirs during the season of 1921, have brought response that we have not had heretofore. These circular letters were followed up by a visit from the Division Engineer, who explained the contents thereof and gave all possible help in systematizing their work and records.

The Division Engineer finds that frequent calls on the water commissioners helps to encourage them in their work, and gives them assurance and interest that has been lacking.

A summary of the water commissioners' ditch reports shows 855 ditches in the division; average daily amount of water diverted, 2,224 c. f. s.; total of 379,052 acre-feet used; 162,674 acres irrigated, and 237,529 that can be irrigated under the present system of ditches.

The irrigation season averages about 90 days. The average acre-foot per acre used is 2½. The irrigation season and duty of water, of course, varies with each different water district, as well as with different sections of the same district.

These reports are semi-complete, inasmuch as the average daily amount used in most cases is estimated. The same with the length of time the water was used; and while it was impossible for the water commissioner to visit personally each individual ditch in his district, owing to the attitude taken by the county commissioners on holding down expenses, he obtained the information through reliable sources, so that the important items are as accurate as can be expected without actual measurements of each ditch and acreage irrigated. * * *

It will be noticed on the water commissioners' ditch report that there are a number of ditches diverting water from the very small branch streams of the rivers. These little streams, of course, invariably go dry or are reduced to such an extent that there is not sufficient water for any extent of irrigation, especially after the first of July, and as the heaviest irrigation demand of water in this division is usually during the month of July, these small streams cannot be depended upon for irrigation from the direct flow, although there is considerable run-off while the snow is melting. A number of the users have constructed small reservoirs on these little streams, which give them ample water for the entire irrigation season, and I have been encouraging the building of these reservoirs by individuals or associations, because the water that is stored will make very little difference to the flow in the main streams. * * *

The general conditions in regard to irrigation in this division are favorable, inasmuch as the present upkeep and maintenance is very small, in comparison to the acreage irrigated and the number of ditches diverting water, due to these facts: First, that there are no long canals or expensive structures to maintain; second, most of the ditches are small, the average carrying capacity amounting to something like 6 c. f. s., and these ditches are most generally maintained by the individual users thereof; third, there is very seldom any abnormality in the stream flow or shifting of channels, so the maintaining of headgates is reduced to a minimum.

The irrigation season is short and duty of water low for the greater per cent. of the area in the division, due to the short and steep canals, together with the assistance of moisture from rains at the right time on the growing crops, the late snows leave the land well saturated, and it does not require lengthy service periods to keep the ground saturated to required depth.

There were no reports of a shortage of water this season brought to my attention due to scarcity of water in the streams. However, some users suffered a shortage due to the condition of their ditches and headgates. The water commissioners were called by the users to make various adjustments, and while there were no serious disputes, the Division Engineer was called in several instances to verify the action taken by the water commissioner, for the reason that in most cases there was no measuring device on the ditches under question, or any other means whereby the water commissioner could determine the amount of water in the ditch, other than his regular system of stepping off a distance and dropping a float in the water. It will take some time to overcome this evil, considering the great number of small ditches in this division. * * *

Al Booco, Water Commissioner of District No. 58, brought action to recover his salary after three months' pay had been laid aside by the Board of County Commissioners. The same was settled out of court, he receiving full amount of the bill in question. * * *

Written instructions were sent to the water commissioners by County Commissioners of Routt County, dated August 3, 1921, to stop all extra work, and to go out only on actual calls, to adjust ditches, itemize all bills, giving names of parties calling, the names of ditches and dates when called. Of course the former part of these instructions are reversed to those sent out by me at the beginning of the season, and the water commissioners have been complying as nearly as possible with the instructions from this office.

The County Commissioners of Rio Blanco County made arrangements with A. E. Johnson, Water Commissioner of District No. 43, whereby he was to receive a straight salary of $125.00 per month, he in return to answer such calls as were sent from time to time by the water users. This arrangement was unknown to this office until I made inquiry as to why no bills were being sent for my approval. While I was considering some action to have this stopped, I was informed of Mr. Johnson's death, which occurred in August. He had drawn about four months' pay, and when I called to take over the books and records, I could not find where any work had been done. The matter was taken up with the county commissioners, who consented to appoint a man temporarily to get out the annual ditch and reservoir report. Mr. D. K. Shaw, County Surveyor of Rio Blanco County, was assigned to this work. His work and report are very satisfactory, considering the short time that was allowed him for the same. * * *

The Water Commissioner of District No. 54, E. W. Leggett, promised to send in a ditch report. However, the same has not been received at the writing of this report. Therefore, I am making an estimate as in the case of District No. 57, of the total acreage irrigated and the daily average amount of water carried and the total number of acres that can be irrigated, which is only an approximation, but will be within a very small per cent. of the actual figures.

RECOMMENDATIONS

You will find attached hereto a sample form of weekly report to be made out by the water commissioners. The regular form used for this information is not adapted to present conditions in this territory, as the water commissioner has no means of knowing how much water is entering or leaving their districts as a whole, due to the fact of the numerous streams in each district, in some of which water is scarce, in others the water is plentiful for all demands. Therefore, I have not made it compulsory for the water commissioners to send in their reports on these present forms, as I considered it a waste of time and of no practicable value, inasmuch as they could not intelligently fill them out with any information called for on these blanks.

The attached form can treat on one or more streams in a district where scarcity occurs, as well as give a summary of the entire district where obtainable. I believe these reports are necessary, or some report at least, once a week by the water commissioner, besides giving a line on the distribution of water and conditions in each district. It will tend to show what the commissioner has been doing, and give the division engineer something to go on in approving his bills. Would appreciate your giving this matter your consideration.

Another suggestion that I have to offer that will tend to increase the efficiency and substantiate the records of this office, is the use of a form for gathering statistics as called for under water commissioners' ditch and reservoir reports. This blank to be mailed to the ditch owner to fill out, and return to the division engineer's office or to the water commissioner. Sample of the form is attached hereto. I have tried this out in a few cases this year, and I find it to be very satisfactory. In this division, disputes over water are few and far between at the present time, and probably will be for the next few years, or until there is a heavier demand for the water. These disputes that do arise when the commissioner is called, are usually on small streams, and were we to depend upon the information he could gather on these calls, we would get about one per cent. of a complete water commissioners' ditch report. Taking into consideration the attitude of the present county commissioners in regard to what they call this extra work, ''which is not a new story,' and the advantage of having this data on file to be used when the occasion arises, I believe this system can be worked out to overcome this difficulty such as we have had this year. The records will be more authentic and can be obtained by much less cost.

This office was visited by R. I. Meeker, Special Deputy State Engineer, in July, and he remained a few days in the division, traveling over the territory gathering his desired information and calling on the water commissioners. Mr. J. H. Baily, Chief Hydrographer, visited this office during September and went over the territory with me in the interest of the hydrographic work. Your circular letter dated October 19, 1921, asking that publicity be given to certain sections of the law of 1919 concerning the filing of supplemental statements and the registration of deeds of transfer was received at this office and news items were gotten up which were published by nine papers throughout the division. Twelve rating stations were maintained throughout the season. Four additional stations were suspended this season through inability to obtain gage readers. Fifty-six ratings were made on streams and eighteen ratings on ditches.

Attached hereto are the tabulated statements of the water commissioners' ditch and reservoir reports for districts Nos. 43, 44, 54, 55, 56, 57 and 58, all districts comprising Division No. 6.

Data of Districts 55 and 56 was obtained by Division Engineer, as there were no water commissioners. Data of Districts Nos. 54 and 57 was computed by Division Engineer, these commissioners having failed to send in their reports. * * *

Yours very respectfully,

B. T. CHASE,
Irrigation Division Engineer,
Division No. 6.

ANNUAL REPORT IRRIGATION DIVISION ENGINEER, DIVISION NO. 6, 1922

Steamboat Springs, Colorado.

HON. A. J. McCUNE,
State Engineer,
Denver, Colorado.

Dear Sir: I have the pleasure of presenting herewith my annual report of conditions and official acts for the season past, and recommendations for the future in Irrigation Division No. 6, together with the tabulation of water commissioners' ditch and reservoir reports.

The irrigation season commenced with an exceptionally low stream flow. All streams reached their high stage early and dropped rapidly, so that by the time there was a demand for water, the flow was not adequate to supply all appropriations on many of the streams. By the first of July, practically all tributaries were too low to supply the demand, while the main streams were ample throughout the season to supply all ditches.

The reservoirs were all filled early, but owing to their small capacities and the heavy and early demand created by insufficient water in the streams, the water was drawn out early, and in most cases was not ample for the purpose intended.

This was a very dry spring for this division, and the dry weather which has prevailed since spring with the exception of August, continued during September and October. Conditions were favorable for the maturing and harvesting of crops and for outdoor work of all kinds. The effect of the dry season on the crops, while not disastrous, was at least noticeable.

It is the general tendency of the average water user in this division to use more than is good for the crops, and the land becomes waterlogged; therefore, the scarcity of water was really a benefit to the farmer in that it required him to attend more carefully to his irrigation. A short water year also calls attention to the poor condition of the ditches, which will probably result in their putting them in better condition. These poor conditions are always overlooked or ignored by the users whenever the water is plentiful and close measurements are not necessary.

Collecting data and keeping record of the snowfall depths, and precipitation on the headwaters of the streams, such as was done last winter under the direction of your office, was very beneficial to the administration of the Division Engineer's office, and the data thus gathered and compiled was found to be valuable information this season in determining beforehand the probable runoff during the irrigation season of the various streams. By such information it was not difficult to determine in advance that the character of runoff this year would be lower than the average through the irrigation season, and for that reason the water commissioners were informed and thus prepared to be ready to face the situation, and wherever possible the water users were so informed and urged to prepare their ditches and headgates and commence irrigating as early as possible. * * *

On June 28, by request of all the stockholders of the Stillwater Ditch and Reservoir Company, which controls 3,000 acres and are irrigating at the present time about 1,200 acres on Five Pine Mesa south of Yampa, I went over their system with them. They were all interested in having an equitable distribution made of their water. Four hours spent with them in going over the ditch and recommending changes and re-computing the division boxes resulted in a satisfactory settlement of a long-standing discord among the stockholders thereof.

This division has very few incorporated ditch companies and of those that are incorporated only a couple are large enough to employ a superintendent or ditch rider and for that reason the measurements and division of water to the individual users fall upon the farmers themselves. The measurements thus obtained become a matter of first there first served. However, there is a great number of the water users, judging from the interest shown the past season, who have come to the conclusion that to get their just amount of water there must be some means of measurement or division of the same, and this office has received any number of requests both in person and by letter, asking for information on building and installing weirs and for weir tables. I have always responded with what information I could give them off-hand, but I believe there would be a great benefit derived by the publication of pamphlets on the construction and use of farm weirs giving weir tables, also the construction and use of division boxes. * * *

On June 29th my attention was called by letter from your office to a certain protest entered by T. J. Tynan in regard to the division of the water of Watson Creek by A. Booco, Water Commissioner of District No. 58. This matter was immediately taken up with the Water Commissioner, who at the time gave satisfactory explanations of his action. However, he misrepresented the facts as they were at that time, as an investigation later disclosed, as on July 19th I received a call from Mr. Tynan and C. J. Scribner of Yampa, to come at once and straighten matters out.

An investigation disclosed the fact that Mr. Booco, when called to make a division of water in June along the creek, made certain regulations of headgates, among which was to shut down and post a notice to that effect on the headgate of the Ferguson ditch, owned by A. Scribner one of the senior rights on the Creek, and he allowed ditches with no decreed rights and some without headgates, to divert any amount of water that might enter the ditches. He designated one Howard Allen, a water user on the Creek, to go to the headgate of the Moody Ditches Nos. 1 and 2, owned by T. J. Tynan, and make measurements, and allow only a certain amount to be diverted by said ditches. Notices were posted on the headgates of these ditches signed by Howard Allen, Deputy Water Commissioner District No. 58, and Mr. Allen at no time was legally authorized to act.

However, Mr. Booco allowed this to continue with his full knowledge of the same until I served notice on Mr. Allen on July 15 to at once cease his activities along the stream.

There was enough water in Watson Creek at the time Mr. Booco was called, to supply all decreed rights by the direct flow, had there been a careful and complete regulation of the headgates, besides there is storage water carried in this creek to supply some ditches that have no right to the direct flow.

Mr. Booco's action on this creek resulted in charges being filed against him with the Civil Service Commission by T. J. Tynan and C. J. Scribner, for incompetency and various other charges, which resulted in Mr. Booco sending in his resignation to the Civil Service Commission, taking effect in October. * * *

I made it a point to visit the headgates of as many ditches as possible, taking note of their condition, etc. These records I am compiling and tabulating in order to determine the ditches that need ratings, new headgates constructed, or gates repaired, and the character and location of measuring devices needed.

Fifteen river gaging stations were maintained during the season and five stations kept up throughout the winter of 1921 and 1922. One new station was established May 5th, 1922, on Little Snake River near Lily Park. Forty-three discharge measurements were made at these stations. Twenty ditches and canals were rated but no permanent rating stations were established thereon, due to undesirable earth sections and the absence of rating flumes. Mr. J. H. Baily, Chief Hydrographer, visited the division during September, in the interest of the hydrographic work. * * *

Attached hereto is the tabulated statement of the Water Commissioner's ditch and reservoir report for District No. 43.

Yours very respectfully,

B. T. CHASE,
Irrigation Division Engineer,
Division No. 6.

TABULATED STATEMENT OF RESERVOIRS IN DIVISION No. 6

Dist. No.	Total No. Reservoirs In Use	Total Capacity Cu. Ft.	Average Capacity Cu. Ft.	Additional Projects and Remarks
58	15	75,342,736	5,022,849	Seven reservoirs unde rconstruction, 21,000,000 cu. ft.
44	15	67,958,400	4,530,560	Four conditional decrees not constructed, 17,944.057,546 cu. ft.
54	4	23,991,232	5,997,808	One reservoir out of repair and not used. Capacity 8.712,000 cu. ft.
57	22	143,130,682	6.505,040	All used.
55	....	....	....	
56	1	1,425,000	1,425,000	Expect to enlarge to about 4,000,000 cu. ft. capacity.
43	17	46,348,970	2,726,410	Four under construction, total capacity of 38.746,547 cu. ft.
	74	358,197,020	4,839,421	Two abandoned, capacity 452,443 cu. ft.

There are eleven additional reservoirs now under construction with a total capacity of 59,796,547 cu. ft. or an average capacity of 5,436,050 cu. ft.

CHAPTER VIII

HYDROGRAPHIC DEPARTMENT

J. H. Baily, Chief Hydrographer

The work of the hydrographic department can be divided into three main branches as follows:

(a) Rating ditches for the use of Water Commissioners. In this work the hydrographer rates the ditch and furnishes the Water Commissioner with a rating table which gives the amount of water going through the rating flume for any gage height. The ditch also has to be inspected to see if there is any temporary obstruction that may be removed and change the rating.

(b) Seepage measurements. These measurements are made in order to determine the amount of return water to the stream. This enables the Water Commissioners and Division Engineers to tell how much seepage water can be depended upon in each section. They then can tell how much water to pass from each section of the river to supply the ditches of the section below.

(c) Maintaining gaging stations on the different streams and collecting, computing and compiling data for use in determining the undeveloped available water. This work includes the construction of stillwells and installation of automatic registers, chain, and slope gages.

All gage height cards and register sheets have to be inspected each week to determine if the gage readers are reading the gage correctly or if the automatic is working properly.

Measurements are made on each station from six to twenty times during the season when the river is free from ice. The number of measurements is controlled by the stability of the stream channel. Sandy channels are the most difficult to make accruate ratings as they fill and scour so easily.

During the period when the streams are covered with ice, measurements are made every two or three weeks and discharge estimates are then computed from these measurements, gage heights and temperature records. In the fall of the year when the streams have a steady flow and not liable to shift, the records are worked up for the year. This work includes plotting curves for each station, computing mean daily gage heights, and applying the rating to gage heights in order to get the daily flow.

This office maintained 73 gaging stations this last year, 52 of which were equipped with automatic water stage recorders. We also co-operated on 17 stations with neighboring states, the U. S. Geological Survey and different corporations within the state.

The Great Western Sugar Company pay three of our gage readers. We are publishing 122 records of discharge of streams within the state.

Besides the automatic gages owned by the state there are also twelve automatic gage stations maintained on streams of the state by the Geological Survey, seven automatics belonging to private corporations and 32 on ditches, making a total of 104.

The last few years this office has been trying to perfect an automatic that could be sold for less than $50 so that every ditch could afford to use one. The best we have been able to do so far is about $55.00. This buys an instrument of the float type with a five-foot range and using a circular chart. We have had twenty-five of these made in Denver for the use of the state and ditch owners this last year. Ditches in Nebraska are using about a dozen of these gages at the present time.

The Colorado River investigations and water controversies with Nebraska, Kansas and New Mexico have caused the state to maintain additional stations the last two years. Also this fall we have established a station on the White River near Watson, Utah, at an expense of installation of $250.00. This station is equipped with a Stevens continuous record, water stage recorder. On the Colorado River near Cisco, Utah, the states of Colorado and Utah, and the U. S. Geological Survey have erected a cable and installed a Au water stage recorder in order to determine the flow of the Colorado River originating in the State of Colorado. This station is located one quarter of a mile below the mouth of the Dolores River at the old site of Dewey Ferry.

These two stations, with the Mancos River station at Towaoc and Little Snake River near Lily installed in the last two years, allow us to keep accurate measurements on all water that flows across the state line.

During 1922 this office, in co-operation with the Arkansas Valley Ditch Association, carried on a special investigation on the Arkansas River. Mr. Amsley had charge of this investigation with Mr. Burgess for his assistant. The Arkansas Valley Ditch Association furnished us with a hydrographer (Mr. Thomas Curtis) to take charge of the hydrographic work on the upper Arkansas so that Mr. Amsley could devote all his time to this work.

The purpose of this investigation was to determine the return flow to the Arkansas River and to determine the amount of water distributed to each ditch. This necessitated maintaining 75 hydrographic stations. Mr. Amsley also made several sets of seepage measurements from Pueblo to Garden City, Kansas, and Mr. Curtis made four sets from Twin Lakes Reservoir to Pueblo.

During 1921 there was no hydrographer stationed in the San Luis Valley but by carrying on the work from the Denver office we were able to keep up the regular stations. In 1922 Mr. D. S. Jones was appointed hydrographer and not only maintained the stations in the valley but also the stations in the San Juan Drainage.

Mr. Chase, Irrigation Division Engineer, did all the hydrographic work in the Yampa Drainage besides his work as Division Engineer.

Mr. Snyder covered the territory from Dolores at Bedrock to the White River at Meeker. This is a large territory but owing to the small number of ditches to be rated, was handled by Mr. Snyder without much trouble.

Mr. Blight in Division No. 1 had to rate all ditches in the several districts of this division. Owing to the shifting conditions of the South Platte and moss and sand changing the ratings on the ditches, Mr. Blight was constantly in the field. Mr. Blight rated some sixty odd ditches besides the hydrographic work on river stations.

The following table shows the percentage of runoff for the years 1921 and 1922 compared with the mean annual flow of stations in the various drainage areas.

Station	Location	1921	1922
Cache la Poudre River	Canon Mouth	124%	64%
South Platte River	Denver	199%	72%
Arkansas River	Canon City	118%	94%
Rio Grande	Del Norte	147%	145%
Animas River	Durango	124%	117%
Colorado River	Glenwood Springs	125%	88%
Yampa River	Steamboat Springs	136%	71%
North Platte River	Saratoga, Wyo.	135%	76%
Laramie River	Jelm, Wyo.	126%	65%

NOTE—The percentages for the year 1922 are figured for the nine months' period, January 1 to September 30, with the exception of Colorado River, North Platte River and Laramie River which are computed for climatological year.

PLATTE RIVER DRAINAGE

W. T. BLIGHT, HYDROGRAPHER

SOUTH FORK OF SOUTH PLATTE RIVER AT LAKE GEORGE

Location—At highway bridge in Sec. 19, T. 12 S., R. 71 W., one-fourth mile below Lake George, in the Pike National Forest, about 2 miles above the mouth of Caylor Gulch; no tributary between the outlet of the lake and the station.

Records Available—October 22, 1910, to September 30, 1922.

Drainage Area—1,070 square miles.

Gage—Vertical Staff.

Channel—Conditions in the channel will remain unchanged as long as the control for the station—a 2-foot timber-crib dam 50 feet below the gage—remains permanent.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months and measurements are made to determine the flow.

Regulation—The discharge at the station is regulated to some extent by the Antero Reservoir, located about 35 miles above, and by Lake George.

Accuracy—Results are considered fair.

Note—The U. S. Geographic Board has decided that the official name of the Middle Fork of the South Platte River to its mouth at Hartsel, the South Fork of the South Platte River from Hartsel to South Platte and the South Platte River to North Platte, Nebraska, shall be designated as the South Platte River. In this report, however, we are using the names as used locally.

NORTH FORK OF SOUTH PLATTE AT SOUTH PLATTE

Location—In Sec. 25, T. 7 S., R. 70 W., one-third mile above South Platte. No tributary between station and mouth at South Platte.

Records Available—January 4, 1909, to September 30, 1910; April 1, 1913, to September 30, 1922.

Drainage Area—450 square miles.

Gage—Inclined staff whose datum has remained unchanged.

Channel—Somewhat shifting.

Discharge Measurements—Made from car and cable during high and medium stages, and by wading at low stages.

Winter Flow—Ice causes backwater and discharge measurements are made to determine the flow.

Accuracy—Records considered good.

Co-operation—Station maintained in co-operation with the United States Geological Survey.

SOUTH PLATTE RIVER AT SOUTH PLATTE

Location—In Sec. 25, T. 7 S., R. 70 W., in the Pike National Forest, three-fourth of a mile east of South Platte; about 300 feet below junction of the North and South Forks; no tributary between the forks and the station, and none for several miles below.

Records Available—March 28, 1902, September 30, 1922.

Drainage Area—2,610 square miles.

Gage—An automatic recording gage.

Channel—Shifting.

Discharge Measurements—Made from car and cable during high water, and by wading at low stages.

Winter Flow—Ice causes backwater during a portion of the winter months and measurements are made to determine the flow.

Regulation—The flow is regulated to a certain extent by the Cheesman Reservoir, which is on the South Fork about 20 miles above the forks.

Accuracy—Although the channel is shifting, sufficient discharge measurements have been obtained to enable fair estimates of discharge to be made.

Co-operation—Station maintained in co-operation with the United States Geological Survey.

SOUTH PLATTE RIVER AT DENVER

Loocation—Between the 15th Street and 16th Street bridges in Denver, about 500 feet below the mouth of Cherry Creek.

Records Available—May 7, 1895, to September 30, 1922.

Drainage Area—3,840 square miles.

Gage—Automatic and slope gages. The chain gage was replaced by a slope gage November 9, 1916.

Channel—Shifting.

Discharge Measurements—Made from 19th Street bridge, or by wading.

Winter Flow—The flow at this point is seldom affected by ice.

SOUTH PLATTE RIVER NEAR KERSEY

Location—At highway bridge in Sec. 9, T. 5 N., R. 64 W., 1¾ miles north of Kersey, 2 miles below the entrance of Lone Tree Creek, an intermittent stream, and 3 miles below the mouth of the Cach la Poudre River.

Records Available—April 27, 1901, to October 31, 1903; March 1, 1905, to November 30, 1912; January 1, 1914, to September 30, 1922.

Gage—Automatic and slope gages, 300 feet below bridge.

Channel—Shifting.

Discharge Measurements—Made from bridge at high water and by wading at low water.

Winter Flow—Ice causes slight backwater for a few days during the winter.

Accuracy—The channel is extremely shifting and results cannot be considered better than fair.

Co-operation—Station maintained in co-operation with Great Western Sugar Co. and State of Colorado.

SOUTH PLATTE RIVER AT BALZAC

Location—Six hundred feet above highway bridge in Sec. 13, T. 5 N., R. 55 W., at Balzac. No important tributaries between this station and Kersey.

Records Available—January, 1917, to September 30, 1922.

Gage—Automatic recording gage installed April 26, 1918. New datum established at same time. Old gage on highway bridge.

Channel—River in one channel, very shifting.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during exceptionally cold weather only.

Accuracy—Results are considered fair, when frequent discharge measurements are made.

SOUTH PLATTE RIVER AT OVID

Location—At highway bridge south of Ovid in Sec. 8, T. 11 N., R. 45 W. Lodge Pole Creek enters one-half mile below station. Station was moved to Ovid from Julesburg on May 11, 1922.

Records Available—Julesburg April 2, 1902, to November 16, 1906; May 12, 1908, to November 30, 1912; April 8, 1914, to May 10, 1922. Ovid May 11, 1922, to September 30, 1922.

Gage—Automatic and slope and chain gages.

Channel—Shifting.

Discharge Measurements—Made from bridge at high water, and wading at low stages.

Winter Flow—Ice causes backwater during winter months.

Accuracy—Sufficient measurements have been made so that results can be considered good.

Co-operation—Station maintained in co-operation with the Great Western Sugar Company.

BEAR CREEK AT STARBUCK

Location—In Sec. 32, T. 4 S., R. 70 W., at highway bridge at Starbuck Post Office.

Drainage Area—111 square miles.

Records Available—October 1, 1919, to September 30, 1922.

Gage—Vertical staff located on downstream side of south abutment.

Discharge Measurements—Made from bridge at high water, and wading at low stages.

Channel and Control—Channel composed of boulders and cobbles; control 60 feet below station. Fairly permanent.

Ice—Discharge affected for short periods during winter. Flow estimated during these periods by means of frequent measurements.

Accuracy—Results good.

CLEAR CREEK NEAR GOLDEN

Location—In Sec. 32, T. 3 S., R. 70 W., 1½ miles above Golden. Station located one-half mile upstream prior to May 3, 1919. The only tributary of importance between the station and the mouth is Ralston Creek which enters about 12 miles below.

Records Available—December 4, 1908, to December 31, 1909; June 8 to September 24, 1911; January 26, 1912, to September 30, 1922.

Drainage Area—Approximately 380 square miles.

Gage—Automatic recording gage, whose datum has remained unchanged.

Channel—Slightly shifting.

Discharge Measurements—Made from car and cable located near the gage.

Winter Flow—Ice causes backwater during the winter months, but discharge measurements are made to determine the approximate winter flow.

Accuracy—Conditions are favorable for accurate results, and the records should be reliable.

Co-operation—Records were furnished by the United States Geological Survey.

SOUTH BOULDER CREEK AT ELDORADO SPRINGS

Location—At the mouth of the canyon at Eldorado Springs, in Sec. 30, T. 1 S., R. 70 W., 3 miles southwest of Marshall. No important tributaries within several miles.

Records Available—May 15, 1895, to September 30, 1901; July 1, 1904, to September 30, 1922.

Drainage Area—125 square miles.

Gage—Vertical staff; datum unchanged.

Channel—Fairly permanent.

Discharge Measurements—Made by wading.

Winter Flow—Warm springs keeping channel open during the winter.

Note—Discharge estimates include the diversions of community ditch.

BOULDER CREEK NEAR ORODELL

Location—One mile above Orodell station, Sec. 34, T. 1 N., R. 71 W.

Records Available—May 12, 1917, to September 30, 1922. From May 14, 1895, to December 20, 1909, a station was maintained four miles below present station. From March 8, 1907, to November 26, 1914; February 27 to December 12, 1916, a station was maintained one mile below present station.

Drainage Area—108 square miles.

Gage—Automatic recording gage installed by the Colorado Power Company.

Channel—Shifting in extremely high water.

Discharge Measurements—Made from car and cable.

Winter Flow—Ice causes backwater during winter months and during this period discharge measurements are made to determine the flow.

Artificial Control—The Colorado Power Company's plant, one mile above the station, withholds the water for a portion of the day and thus causes considerable variation of gage height during low water.

Co-operation—Station maintained in co-operation with the Colorado Power Company.

ST. VRAIN CREEK AT LYONS

Location—Three-fourths of a mile below Lyons, in Sec. 17, T. 3 N., R. 70 W., one-fourth mile below the junction of North and South St. Vrain Creeks and just below Stone Canyon.

Records Available—August 1, 1887, to October 31, 1890; June 13, 1895, to October 31, 1903; July 1, 1904, to September 30, 1922.

Drainage Area—209 square miles.

Gage—Inclined staff gage installed August 9, 1909, at practically the same datum as the inclined staff gage used from 1895 to 1903. It is not known whether the gage used prior to 1895 was located at the present site.

Channel—Permanent.

Discharge Measurements—Made from car and cable.

Winter Flow—Ice causes very little backwater at this station.

Co-operation—Station maintained in co-operation with the Great Western Sugar Co.

BIG THOMPSON RIVER NEAR DRAKE

Location—In the NW¼ Sec. 2, T. 5 N., R. 71 W., at Halfway, one-half mile east of Drake.

Drainage Area—27 square miles.

Records Available—September 18, 1917, to September 30, 1922.

Gage—Vertical staff.

Discharge Measurements—High water stage from a highway bridge above station and wading at station at low stages.

CACHE LA POUDRE RIVER AT MOUTH OF CANON, NEAR FORT COLLINS

Location—In Sec. 15, T. 8 N., R. 70 W., 3 miles below the intake of the Fort Collins waterworks, 12 miles above Fort Collins; half a mile above mouth of Lewstone Creek.

Records Available—March 15, 1884, to October 15, 1901; February 3, 1910, to September 30, 1922.

Drainage Area—1,060 square miles.

Gage—An automatic recording gage installed November 30, 1909. No information available concerning the gage used 1884 to 1901.

Channel—Permanent.

Discharge Measurements—Made from car and cable.

Winter Flow—Ice causes backwater during the winter months.

Regulation—The flow is regulated by the Chambers Lake and Halligan Reservoirs and by ditches diverting water from the headwaters of the Laramie and Grand Rivers and Michigan Creek across the divide.

NORTH PLATTE RIVER NEAR NORTH GATE

Location—In Sec. 11, T. 11 N., R. 80 W., at highway bridge on Interstate Highway, 6 miles south of Colorado-Wyoming line and 6 miles northwest of North Gate, in Jackson County. Three small tributaries, Camp, Three-Mile, and Six-Mile Creeks, enter North Platte between station and state line. These have very little flow except spring run-off.

Drainage Area—1,440 square miles.

Records Available—May 23, 1915, to September 30, 1922.

Gage—Vertical staff located at downstream side of center pier. Recording gage installed April 8, 1918.

Discharge Measurements—Made from two-span bridge during high water, and by wading at low stages.

Channel and Control—Channel composed of sand, gravel and small boulders; control located 200 feet downstream at small rapids which shift slightly. Banks not liable to overflow.

Ice—Discharge relation seriously affected by ice; observations discontinued during winter months.

Regulation—None.

Accuracy—Results excellent.

Co-operation—Station maintained by the United States Geological Survey, from whom records were obtained.

LARAMIE RIVER AT GLENDEVEY

Location—At highway bridge one-eighth mile west of Glendevey in Sec. 36, T. 10 N., R. 76 W., in the Medicine Bow National Forest.

Records Available—June 24, 1904, to October 31, 1905; August 18, 1910, to September 30, 1922.

Drainage Area—102 square miles.

Gage—Vertical staff and automatic gages.

Channel—Permanent.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

Accuracy—Conditions are favorable for excellent results, and the estimates should be reliable.

Co-operation—Station maintained in co-operation with United States Geological Survey.

LARAMIE RIVER NEAR JELM, WYOMING

Location—At highway bridge in Sec. 15, T. 12 N., R. 77 W., 4 miles south of Jelm Postoffice, one-fourth mile below the Colorado-Wyoming line.

Records Available—May 7, 1911, to September 30, 1922. From June 22, 1904, to October 31, 1905, a station was maintained at Decker's ranch, half a mile south of the state line. The records at the two stations are practically comparable, as there are no tributries nor diversions of any amount between.

Drainage Area—293 square miles.

Gage—In 1911 an automatic recording gage was installed. This is referred to the same datum as the vertical staff used at first.

Channel—Practically permanent.

Discharge Measurements—Made from bridge.

Winter Flow—Ice causes backwater during the winter months and the records are discontinued.

Accuracy—Conditions are favorable for accurate results, and the estimates should be excellent.

Co-operation—Station maintained in co-operation with State of Wyoming and United States Geological Survey.

Discharge of South Fork of South Platte River at Lake George for 1921.
Drainage Area, 1,070 Square Miles. Altitude, 7,963 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	90	40	130	112	222	352	462	73	66	....
2	....	....	90	36	124	155	198	369	478	102	66	....
3	....	....	90	33	112	195	172	386	425	127	73	....
4	....	....	95	29	112	395	202	290	365	195	73	....
5	....	....	95	28	135	683	328	244	340	239	73	....
6	....	....	100	26	135	835	374	210	305	214	73	....
7	....	....	92	24	138	958	272	180	282	291	68	....
8	....	....	80	21	126	798	195	165	250	318	40	....
9	....	....	88	19	101	578	148	158	219	274	33	....
10	....	....	92	19	83	560	152	172	202	147	30	....
11	....	....	100	19	77	655	150	190	192	121	42	....
12	....	....	95	19	69	739	178	356	175	134	63	....
13	....	....	85	19	67	820	198	361	155	158	68	....
14	....	....	56	19	62	828	290	361	142	158	61	....
15	....	....	52	19	76	1000	812	395	133	158	94	....
16	....	....	88	24	77	1230	608	374	130	140	88	....
17	....	....	72	40	72	775	648	312	126	108	68	....
18	....	....	70	50	69	590	450	271	128	97	105	....
19	....	....	69	155	64	500	560	264	130	94	144	....
20	....	....	64	178	54	400	805	286	121	94	184	....
21	....	....	60	198	44	348	634	316	118	86	187	....
22	....	....	62	213	40	292	478	332	127	86	184	....
23	....	....	57	231	38	234	456	425	111	80	140	....
24	....	....	50	264	38	228	704	530	94	52	97	....
25	....	....	49	244	36	261	812	395	85	40	130	....
26	....	....	46	219	32	286	590	400	102	52	162	....
27	....	....	42	190	27	272	655	405	108	52	176	....
28	....	....	40	135	24	258	440	420	97	46	162	....
29	....	....	42	110	22	244	378	489	80	44	147	....
30	....	....	40	130	19	240	378	450	88	75	134	....
31	....	....	40	....	33	....	324	420	....	66	....	....
Total	....	....	2191	2751	2236	15469	12811	10278	5770	3921	3031	....
Mean	....	....	70.7	91.7	72.1	516	413	332	192	126	101	....
Max	....	....	100	264	138	1230	812	530	478	318	187	....
Min	....	....	40	19	19	112	148	158	80	40	30	....
Acre-ft.	....	....	4350	5460	4430	30700	25400	20400	11400	7750	6010	....

Discharge of South Fork of South Platte River at Lake George for 1922.
Drainage Area, 1,070 Square Miles. Altitude, 7,963 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	80	110	112	33	30	93	....	....	....
2	....	....	....	80	91	82	93	230	69	....	....	....
3	....	....	....	87	80	59	105	250	63	....	....	....
4	....	....	....	119	80	45	82	210	72	....	....	....
5	....	....	....	117	80	37	63	130	69	....	....	....
6	....	....	....	87	78	32	50	110	56	....	....	....
7	....	....	....	63	76	33	38	45	54	....	....	....
8	....	....	....	74	74	30	30	38	50	....	....	....
9	....	....	....	59	65	35	15	42	47	....	....	....
10	....	....	....	38	52	70	8.5	217	42	....	....	....
11	....	....	....	42	50	82	6.0	78	50	....	....	....
12	....	....	....	39	47	70	4.0	59	30	....	....	....
13	....	....	....	42	42	69	4.5	54	29	....	....	....
14	....	....	....	35	39	69	6.5	35	29	....	....	....
15	....	....	....	37	42	82	7.5	55	29	....	....	....
16	....	....	....	34	52	96	7.0	70	30	....	....	....
17	....	....	....	32	63	129	7.5	80	37	....	....	....
18	....	....	....	34	57	110	6.5	60	38	....	....	....
19	....	....	....	37	45	76	6.0	106	37	....	....	....
20	....	....	....	37	41	61	6.0	134	32	....	....	....
21	....	....	....	38	37	50	7.0	119	30	....	....	....
22	....	....	....	41	34	42	13.0	107	30	....	....	....
23	....	....	....	41	45	37	8.0	98	32	....	....	....
24	....	....	....	42	29	41	5.5	96	30	....	....	....
25	....	....	....	41	30	54	5.0	89	27	....	....	....
26	....	....	....	63	30	61	5.5	80	26	....	....	....
27	....	....	....	82	30	63	23	80	26	....	....	....
28	....	....	....	96	45	63	87	74	27	....	....	....
29	....	....	....	112	68	42	49	76	28	....	....	....
30	....	....	....	85	80	49	29	82	29	....	....	....
31	....	....	....	....	100	....	30	107	....	....	....	....
Total	....	....	....	1809	1792	1881	841	3041	1241	....	....	....
Mean	....	....	....	60.3	57.8	62.7	27.1	98.1	41.4	....	....	....
Max	....	....	....	117	110	129	105	250	93	....	....	....
Min	....	....	....	32	29	30	4	30	26	....	....	....
Acre-ft.	....	....	....	3590	3550	3730	1670	6030	2460	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork of South Platte River at South Platte for 1921.
Drainage Area, 450 Square Miles. Altitude, 6,097 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	....	66	530	820	598	598	340	167	123	75
2........	....	....	....	71	575	820	575	598	340	167	123	69
3........	....	....	....	71	620	770	552	575	340	167	123	64
4........	....	....	....	77	670	1140	552	508	302	165	117	50
5........	....	....	....	77	720	1360	620	440	285	165	116	50
6........	52	....	....	69	870	1520	552	440	268	165	108	52
7........	....	....	....	62	820	1690	508	440	268	174	108	58
8........	....	....	....	55	720	1860	440	400	250	185	108	41
9........	....	....	....	74	670	1800	440	380	235	153	91	41
10........	....	....	....	69	670	1740	400	380	220	151	52	31
11........	....	....	....	80	670	1690	420	380	220	151	75	20
12........	....	....	....	92	670	1640	420	360	220	151	97	42
13........	....	....	66	80	670	1520	462	360	235	151	88	132
14........	....	....	52	77	670	1470	530	400	235	151	88	108
15........	....	....	62	80	670	1420	620	485	235	142	88	81
16........	....	....	59	100	670	1300	598	360	235	132	88	52
17........	....	....	71	206	670	1140	530	268	235	132	88	19
18........	....	....	62	145	670	1080	770	235	220	132	64	17
19........	....	....	62	193	620	975	670	250	220	132	47	17
20........	....	....	66	285	575	870	598	302	206	126	64	18
21........	....	....	62	320	575	870	575	285	206	114	88	20
22........	....	....	62	340	575	770	552	250	206	114	98	25
23........	....	....	220	530	575	770	670	360	180	114	97	30
24........	....	....	250	670	670	770	670	620	180	114	69	34
25........	....	....	268	530	670	770	670	440	180	125	88	52
26........	....	....	250	485	670	770	620	440	180	112	81	75
27........	....	....	166	530	770	720	598	440	168	112	58	88
28........	....	....	76	440	820	670	575	380	156	120	64	75
29........	....	....	71	440	770	670	552	380	156	120	66	58
30........	....	....	71	440	870	620	530	360	156	112	73	81
31........	....	....	63	....	870	....	575	380	....	116	....	81
Total	....	....	2059	6754	21255	34025	17442	12494	6877	4332	2638	1656
Mean..	....	....	108	225	686	1130	563	403	229	140	87.9	53.4
Max....	....	....	268	670	870	1860	770	620	340	185	123	132
Min......	....	....	52	55	530	620	400	235	156	112	47	17
Acre-ft.	....	....	4070	13400	42200	67200	34600	24800	13600	8610	5230	3280

Discharge of North Fork South Platte River at South Platte for 1922.
Drainage Area, 450 Square Miles. Altitude 6,097 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	....	69	231	425	380	218	174	....	....	....
2........	....	....	....	81	218	385	335	455	190	....	....	....
3........	....	....	....	81	218	415	284	251	197	....	....	....
4........	....	....	....	108	204	362	260	209	182	....	....	....
5........	....	....	....	111	254	358	257	223	178	....	....	....
6........	....	....	....	108	278	455	248	228	161	....	....	....
7........	....	....	....	81	295	491	240	190	157	....	....	....
8........	....	....	....	75	278	546	237	190	161	....	....	....
9........	....	....	....	88	260	535	234	190	157	....	....	....
10........	....	....	....	81	260	508	278	182	157	....	....	....
11........	....	....	....	64	192	430	246	174	153	....	....	....
12........	....	....	....	88	192	450	199	167	148	....	....	....
13........	....	....	97	75	199	430	180	148	142	....	....	....
14........	....	....	123	67	192	415	176	174	138	....	....	....
15........	....	....	126	81	204	415	163	157	135	....	....	....
16........	....	....	108	94	202	450	159	167	128	....	....	....
17........	....	....	97	58	220	450	159	190	112	....	....	....
18........	....	....	108	42	237	410	155	202	105	....	....	....
19........	....	....	64	81	303	400	155	331	105	....	....	....
20........	....	....	94	94	270	400	155	323	105	....	....	....
21........	....	....	88	123	307	400	192	197	91	....	....	....
22........	....	....	69	140	303	400	218	207	91	....	....	....
23........	....	....	88	159	335	410	176	202	94	....	....	....
24........	....	....	94	150	323	385	163	197	91	....	....	....
25........	46	....	88	163	465	353	155	190	91	....	....	....
26........	....	....	88	180	450	362	144	178	94	....	....	....
27........	....	....	101	192	596	311	144	182	94	....	....	....
28........	....	....	69	180	470	281	480	178	94	....	....	....
29........	....	....	58	204	508	264	159	161	105	....	....	....
30........	....	....	64	204	540	362	199	182	100	....	....	....
31........	....	....	52	....	415	....	185	178	....	....	....	....
Total	....	....	1676	3322	9419	12258	6715	6321	3930	....	....	....
Mean..	....	....	88.2	111	304	409	217	204	131	....	....	....
Max....	....	....	....	204	596	546	480	455	197	....	....	....
Min....	....	....	....	42	192	264	144	148	91	....	....	....
Acre-ft.	....	....	3320	6600	18700	24300	13300	12500	7800	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at South Platte for 1921.

Drainage Area, 2,610 Square Miles. Altitude, 6,097 Feet Above Sea Leved.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	185	114	778	1250	1320	1900	1540	375	339	126
2	....	....	170	117	862	1250	1250	1880	1540	371	329	118
3	....	....	145	120	952	1410	1170	1810	1540	378	322	97
4	....	....	160	125	1010	2340	1190	1620	1480	386	308	83
5	....	....	160	209	1030	3040	1410	1460	1360	485	291	88
6	....	....	145	215	1060	4650	1610	1300	1300	552	278	130
7	....	....	120	202	1020	6140	1500	1150	1180	575	285	130
8	....	....	100	179	898	5700	1300	1120	1160	575	275	130
9	....	....	52	171	868	5240	1210	1090	1030	575	259	130
10	....	....	60	159	832	4800	1180	1180	820	575	243	130
11	....	....	100	163	796	4630	1210	1120	760	530	246	130
12	....	....	110	179	1010	4440	1240	1120	625	465	243	130
13	....	....	110	179	1180	4250	1330	1270	625	465	233	130
14	....	....	110	228	1230	4180	1480	1330	610	465	224	130
15	....	....	116	300	1290	4200	1840	1420	595	465	184	138
16	....	....	116	80	1280	4030	2150	1330	585	465	143	126
17	....	....	116	190	1280	3750	2060	1270	515	465	138	88
18	....	....	120	366	1330	3140	2120	1200	496	388	128	88
19	....	....	118	444	1260	2690	2300	1130	496	322	79	88
20	....	....	128	625	1150	2470	2370	1030	436	315	116	88
21	....	....	120	675	1160	2260	2410	1030	392	312	163	172
22	....	....	111	724	1140	2070	2160	1000	380	322	163	160
23	....	....	222	988	1130	1880	2200	1180	373	336	163	140
24	....	....	334	1170	1270	1890	2230	1480	380	336	138	140
25	....	....	331	952	1220	1840	2350	1390	376	360	140	140
26	....	....	314	826	1170	1860	2230	1510	376	350	128	140
27	....	....	241	736	1160	1670	2200	1570	388	339	114	140
28	....	....	108	675	1250	1490	1930	1510	392	332	118	140
29	....	....	118	645	1220	1450	1810	1510	376	336	112	140
30	....	....	118	695	1190	1400	1670	1510	373	336	123	140
31	....	....	111	....	1250	....	1600	1570	....	325	....	140
Total	....	....	4569	12451	34276	91410	54030	41990	22399	12876	6025	3890
Mean	119	119	147	415	1110	3050	1740	1350	747	415	201	125
Max	....	....	334	1170	1330	6140	2410	1900	1540	575	339	....
Min	....	....	52	80	778	1250	1170	1000	373	312	79	....
Acre-ft.	7320	6610	9040	24700	68200	181000	107000	83000	44400	25500	12000	7690

Discharge of South Platte River at South Platte for 1922

Drainage Area, 2,610 Square Miles. Altitude, 6,097 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	158	852	1000	720	469	530	....	....	....
2	....	....	....	184	797	963	670	748	552	....	....	....
3	....	....	....	193	748	858	620	1030	530	....	....	....
4	....	....	....	221	705	705	670	975	485	....	....	....
5	....	....	....	246	720	695	695	885	453	....	....	....
6	....	....	....	227	802	720	695	775	441	....	....	....
7	....	....	....	187	836	1000	620	552	429	....	....	....
8	....	....	....	158	764	1040	552	557	433	....	....	....
9	....	....	....	175	715	975	425	534	508	....	....	....
10	....	....	....	163	640	975	425	526	367	....	....	....
11	....	....	....	149	548	897	405	695	322	....	....	....
12	....	....	....	158	481	909	375	580	315	....	....	....
13	....	....	....	143	473	1010	397	445	305	....	....	....
14	....	....	....	138	457	1280	530	450	295	....	....	....
15	....	....	....	160	494	1230	620	457	301	....	....	....
16	....	....	....	175	508	1230	620	425	315	....	....	....
17	....	....	....	105	539	1200	575	508	285	....	....	....
18	....	....	....	179	695	1160	441	530	275	....	....	....
19	....	....	....	259	797	1130	437	620	278	....	....	....
20	....	....	....	315	863	1130	437	575	312	....	....	....
21	....	....	249	382	874	1050	465	748	268	....	....	....
22	....	....	239	429	819	969	575	775	268	....	....	....
23	....	....	196	485	858	808	530	720	259	....	....	....
24	....	....	227	508	1000	764	508	695	285	....	....	....
25	181	....	230	548	1060	750	405	477	243	....	....	....
26	....	....	218	611	1060	735	364	437	239	....	....	....
27	....	....	227	645	1180	720	401	421	243	....	....	....
28	....	....	187	645	1270	695	620	394	243	....	....	....
29	....	....	158	715	1320	670	695	350	243	....	....	....
30	....	....	155	819	1340	670	552	375	246	....	....	....
31	....	....	135	....	945	....	445	530	....	....	....	....
Total	4743	5180	5611	9480	25160	27938	16489	18258	10268	....	....	....
Mean	153	185	181	316	812	931	532	589	343	....	....	....
Max	....	....	....	819	1340	1280	720	1030	552	....	....	....
Min	....	....	....	105	457	670	364	350	239	....	....	....
Acre-ft.	9410	10300	11100	18800	49900	55400	32700	36200	20400	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Denver for 1921

Drainage Area, 3,840 Square Miles. Altitude, 5,240 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	92	110	194	88	1120	1270	684	1900	1220	131	247	173
2	105	110	200	72	1250	1320	550	2560	1130	136	247	176
3	107	96	167	61	1420	1460	413	2510	1070	136	182	176
4	101	92	143	55	1530	4010	471	1780	1070	136	191	185
5	96	78	170	44	1610	5540	684	1430	916	143	221	197
6	99	86	164	61	1610	7010	797	1080	820	161	215	203
7	107	74	148	82	1710	8250	1090	975	614	231	218	209
8	86	69	141	65	1610	8790	797	908	478	282	203	221
9	80	66	126	68	1430	8290	490	933	390	322	206	209
10	90	71	124	65	1290	7350	413	758	318	302	215	227
11	88	110	138	76	1380	6530	390	743	294	306	238	206
12	74	128	128	58	933	5600	343	805	286	244	294	206
13	65	131	124	68	1070	5140	302	628	218	215	302	209
14	69	143	114	65	1160	4600	496	844	218	215	278	209
15	114	156	78	138	1260	4720	1010	1400	248	258	262	194
16	124	121	65	179	1340	4840	1420	1220	251	258	218	179
17	114	114	61	538	1340	4760	1280	1030	255	231	203	159
18	116	126	59	670	1340	4040	1280	933	234	203	187	170
19	126	119	61	958	1270	3150	1880	828	212	170	167	164
20	110	114	61	1280	1090	2890	1670	550	203	143	200	218
21	96	103	62	1460	916	2540	1720	490	185	136	244	214
22	92	110	65	1460	1000	2180	1620	448	179	131	262	209
23	103	110	58	1760	1220	1960	1530	526	215	131	244	179
24	101	116	212	2500	1270	1740	1630	1000	191	131	227	164
25	94	176	286	2560	1270	1540	2210	1160	179	191	200	194
26	105	161	258	2090	1220	1440	2140	1140	173	182	191	179
27	105	164	251	1660	1140	1340	1920	1290	179	188	188	215
28	128	176	209	1270	1120	1250	1790	1290	148	188	194	212
29	136	....	124	1040	1180	1030	1420	1290	146	197	176	212
30	107	....	103	1010	1190	781	1240	1200	141	209	170	200
31	107	....	80	....	1220	....	1080	1280	....	200	....	209
Total	3137	3230	4174	21501	39509	115361	34760	34929	12181	6107	6591	6077
Mean	101	115	135	717	1270	3850	1120	1130	406	197	220	196
Max	136	176	286	2560	1710	8790	2210	2560	1220	322	302	227
Min	65	66	58	44	916	781	302	448	141	131	167	164
Acre-ft.	6210	6390	8300	42700	78100	229000	68900	69500	24200	12100	13100	12100

Discharge of South Platte River at Denver for 1922.

Drainage Area, 3,840 Square Miles. Altitude, 5,240 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	190	148	115	74	896	660	534	233	262	....	....	....
2	199	115	185	83	842	562	473	590	218	....	....	....
3	238	104	257	123	776	457	430	596	334	....	....	....
4	204	90	314	130	654	387	329	753	300	....	....	....
5	130	104	190	100	602	419	366	914	171	....	....	....
6	119	93	152	70	602	534	435	866	123	....	....	....
7	107	109	157	50	660	608	462	700	96	....	....	....
8	180	134	218	45	596	574	334	314	96	....	....	....
9	199	180	214	52	457	551	194	360	100	....	....	....
10	175	209	218	96	324	540	281	430	185	....	....	....
11	166	228	152	86	252	540	281	689	266	....	....	....
12	148	175	109	107	166	462	238	360	233	....	....	....
13	162	204	204	185	86	479	209	233	223	....	....	....
14	204	180	134	139	166	602	238	130	218	....	....	....
15	190	143	190	157	387	700	329	257	286	....	....	....
16	180	190	157	199	446	689	314	223	295	....	....	....
17	171	199	180	324	408	735	340	175	271	....	....	....
18	104	218	233	371	365	770	238	403	228	....	....	....
19	96	218	238	435	329	806	157	625	233	....	....	....
20	115	157	171	529	387	794	143	764	228	....	....	....
21	162	152	130	506	425	712	157	637	214	....	....	....
22	190	180	115	568	452	648	290	613	209	....	....	....
23	171	162	134	596	376	562	305	398	194	....	....	....
24	166	185	111	660	430	473	276	585	194	....	....	....
25	166	257	115	726	446	419	209	619	204	....	....	....
26	194	242	96	770	495	625	252	376	199	....	....	....
27	180	180	100	962	596	355	247	314	175	....	....	....
28	199	96	111	968	677	314	1300	262	185	....	....	....
29	204	....	93	848	788	319	1260	194	194	....	....	....
30	166	....	83	914	1040	398	712	171	190	....	....	....
31	162	....	77	....	812	....	310	209	....	....	....	....
Total	5237	4652	4953	10873	15938	16694	11643	13993	6324	....	....	....
Mean	169	166	160	362	514	556	376	451	211	....	....	....
Max	238	257	314	968	1040	806	1300	914	334	....	....	....
Min	96	90	77	45	86	314	143	130	96	....	....	....
Acre-ft.	10400	9220	9840	21500	31600	33100	23100	27700	12600	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River Near Kersey for 1921
Atitude, 4,612 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	752	507	514	270	1060	808	862	508	526	326	550	671
2	704	451	494	265	1310	832	651	570	468	355	538	684
3	712	501	487	265	1600	912	514	1030	404	338	532	684
4	704	507	487	256	2120	1800	638	2140	383	383	520	671
5	651	474	468	232	2730	10500	990	2090	435	370	508	664
6	637	540	514	217	3210	18300	1070	1560	462	351	502	704
7	608	574	428	224	3610	31000	990	1260	414	351	490	760
8	567	574	410	224	4400	30000	760	950	276	394	484	822
9	547	594	399	224	3370	30000	691	752	266	441	496	854
10	547	588	344	214	2360	29000	576	612	247	496	514	878
11	567	630	324	199	1640	26000	404	462	245	605	520	894
12	554	615	318	187	2220	23300	388	383	246	658	514	902
13	567	615	324	184	810	19900	404	399	254	664	502	918
14	584	615	308	199	581	19900	404	399	249	664	508	910
15	594	608	294	279	540	18300	409	414	248	631	532	902
16	520	601	294	474	574	16800	718	950	252	612	582	862
17	450	533	294	688	520	15400	791	830	255	612	618	799
18	382	554	298	824	2620	12800	910	791	268	570	711	783
19	382	540	303	980	3120	11000	1260	651	311	532	752	807
20	355	474	294	1210	2260	9000	1780	520	378	532	745	807
21	350	445	284	1320	1620	9500	1380	378	378	514	711	830
22	350	457	284	1270	1310	5200	1070	383	378	490	768	854
23	350	457	298	1140	1050	3690	1050	388	351	479	862	878
24	388	457	308	1600	1030	3240	1030	388	334	479	846	894
25	394	451	289	3870	1030	2800	1150	732	326	532	838	830
26	360	451	298	3940	1470	2500	1120	783	334	582	814	799
27	399	560	313	3640	1440	2380	1260	738	334	589	775	838
28	486	540	318	5100	784	1860	1090	752	351	570	732	862
29	474	....	284	1780	527	1460	870	768	334	582	691	894
30	462	....	274	1300	594	1130	651	684	334	576	691	918
31	486	....	265	....	615	....	508	631	....	563	....	918
Total	15883	14913	10811	32575	52125	359302	26389	23896	10041	15841	18846	25491
Mean	512	533	349	1090	1680	12000	851	771	335	511	628	822
Max	752	630	514	5100	4400	31000	1780	2140	526	664	862	914
Min	350	445	265	184	520	808	388	378	245	226	484	664
Acre-ft.	31500	29600	21500	64900	103000	714000	52300	47400	19900	31400	37400	50500

Discharge of South Platte River Near Kersey for 1922
Altitude, 4,612 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	820	500	421	568	475	299	85	128	107	....	....	....
2	809	500	425	553	448	150	103	142	111	....	....	....
3	809	500	486	553	430	96	107	118	111	....	....	....
4	826	491	748	539	400	109	125	185	107	....	....	....
5	775	486	775	578	339	109	130	152	103	....	....	....
6	684	476	721	520	245	96	147	174	100	....	....	....
7	674	462	613	475	176	87	150	255	103	....	....	....
8	674	491	613	452	163	85	118	205	105	....	....	....
9	633	563	648	434	145	85	109	171	107	....	....	....
10	653	618	653	439	89	83	118	155	109	....	....	....
11	638	668	638	439	75	81	114	147	107	....	....	....
12	658	648	653	484	74	78	111	116	107	....	....	....
13	648	618	623	498	81	74	98	109	107	....	....	....
14	633	608	638	493	81	87	94	105	109	....	....	....
15	623	618	573	489	76	245	89	103	109	....	....	....
16	603	623	544	475	70	130	89	100	111	....	....	....
17	573	623	505	521	68	107	94	107	135	....	....	....
18	529	623	486	604	64	100	96	109	135	....	....	....
19	420	618	491	634	56	103	94	107	140	....	....	....
20	420	613	578	654	54	103	96	107	145	....	....	....
21	440	588	633	619	54	89	96	111	142	....	....	....
22	440	539	598	584	54	85	96	171	142	....	....	....
23	449	500	648	535	54	87	92	114	135	....	....	....
24	460	486	633	480	58	89	92	107	111	....	....	....
25	500	496	623	498	66	92	92	100	109	....	....	....
26	550	539	608	475	72	89	94	100	107	....	....	....
27	638	539	598	569	72	87	100	98	109	....	....	....
28	563	462	593	624	72	96	103	100	116	....	....	....
29	548	....	588	624	83	87	165	105	111	....	....	....
30	510	....	588	535	229	85	258	105	109	....	....	....
31	496	....	578	....	265	....	188	107	....	....	....	....
Total	18696	15496	18520	15945	4689	3193	3543	4013	3459	....	....	....
Mean	603	553	597	532	151	106	114	129	115	....	....	....
Max	826	668	775	654	475	299	258	255	145	....	....	....
Min	420	462	421	434	54	74	89	98	100	....	....	....
Acre-ft.	37100	30700	36700	31700	9290	6310	7010	7930	6840	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Balzac for 1921

Altitude, 4,090 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	215	52	29	29	252	311	1870	549	215	416	382	78
2........	247	45	28	26	73	630	1760	465	164	448	356	87
3........	269	45	28	27	52	1030	1690	430	104	416	247	98
4........	151	48	26	29	43	1350	1620	711	90	389	168	68
5........	68	48	26	28	37	1760	1540	1320	87	369	134	30
6........	59	48	28	26	46	5900	1470	1310	101	356	124	84
7........	57	55	30	29	134	12000	1400	1070	117	305	111	168
8........	54	50	30	29	953	17100	1340	890	181	330	120	451
9........	52	48	28	29	1810	18300	1270	657	247	356	120	465
10........	57	30	28	29	2360	30400	1270	487	349	356	138	480
11........	54	30	28	28	2050	31200	1210	409	510	343	147	444
12........	46	61	29	26	1270	27500	1030	293	299	362	151	376
13........	54	57	24	30	299	25600	820	263	324	349	151	313
14........	66	45	30	34	59	23600	820	293	274	341	125	252
15........	182	35	27	29	84	20900	630	305	252	334	100	168
16........	76	76	26	30	81	21800	548	258	220	327	73	111
17........	63	29	26	31	35	21500	402	317	201	319	70	215
18........	54	31	26	32	24	20300	336	293	242	312	70	464
19........	46	34	27	34	59	19100	324	210	286	305	78	581
20........	45	32	30	35	343	14600	242	206	269	206	73	564
21........	46	32	31	37	556	12600	258	196	286	191	70	525
22........	45	35	31	50	480	10900	330	258	305	186	78	510
23........	48	23	28	48	263	7680	247	274	423	210	76	502
24........	57	22	26	52	556	5030	389	305	505	191	87	444
25........	54	24	27	55	423	3540	525	389	525	286	87	465
26........	46	26	32	168	362	2700	548	452	510	430	73	465
27........	48	30	45	1610	274	2170	693	472	510	423	63	465
28........	46	31	30	2960	458	2000	1170	409	502	382	63	548
29........	46	....	26	2270	589	2000	1410	382	437	376	70	548
30........	108	....	26	1010	423	1920	986	336	369	395	76	573
31........	66	....	26	....	286	....	684	280	....	409	....	409
Total	2525	1122	882	8850	14734	365421	28832	14494	8904	10418	3681	10951
Mean..	81.5	40.1	28.4	295	475	12200	930	468	297	336	123	353
Max....	269	76	45	2960	2360	31200	1870	1320	525	448	382	581
Min.....	45	22	24	26	24	311	242	196	87	186	63	30
Acre-ft.	5010	2230	1750	17600	29200	726000	57200	28800	17700	20700	7320	21700

Discharge of South Platte River Near Balzac for 1922.

Altitude, 4,090 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	258	495	931	106	28	143	246	95	223	....	....	....
2........	225	395	1050	117	31	140	235	113	227	....	....	....
3........	182	451	931	70	29	134	219	202	205	....	....	....
4........	130	349	684	38	124	131	192	235	205	....	....	....
5........	134	293	800	34	31	108	181	212	212	....	....	....
6........	177	263	870	35	31	93	122	212	239	....	....	....
7........	263	286	870	35	31	86	131	235	231	....	....	....
8........	293	293	820	30	31	100	159	277	205	....	....	....
9........	349	225	730	29	31	119	149	265	178	....	....	....
10........	409	293	770	31	47	140	156	231	162	....	....	....
11........	376	311	780	27	131	146	146	239	162	....	....	....
12........	430	330	657	20	131	146	140	246	159	....	....	....
13........	548	343	416	18	116	172	156	212	152	....	....	....
14........	451	389	258	18	108	178	134	209	172	....	....	....
15........	409	402	164	17	111	185	131	250	212	....	....	....
16........	369	437	120	17	44	209	146	239	192	....	....	....
17........	225	389	95	17	49	219	165	231	209	....	....	....
18........	225	356	114	17	137	246	165	258	205	....	....	....
19........	220	349	164	21	131	243	165	261	216	....	....	....
20........	220	330	127	45	122	219	137	326	235	....	....	....
21........	220	362	120	92	125	231	119	439	242	....	....	....
22........	240	369	147	147	122	243	152	258	246	....	....	....
23........	300	349	151	104	113	235	152	205	223	....	....	....
24........	400	525	186	37	111	219	159	185	216	....	....	....
25........	500	589	143	26	95	219	175	212	198	....	....	....
26........	639	711	147	73	100	227	175	235	156	....	....	....
27........	564	770	143	437	140	209	131	246	119	....	....	....
28........	458	942	120	134	149	235	134	239	113	....	....	....
29........	299	....	90	29	159	288	202	235	113	....	....	....
30........	382	....	84	31	149	277	134	239	131	....	....	....
31........	382	....	95	....	143	....	103	220	....	....	....	....
Total	10277	11596	12777	1852	2900	5540	4911	7261	5758	....	....	....
Mean..	332	414	412	61.8	93.5	185	158	234	192	....	....	....
Max....	639	942	1050	437	159	288	246	439	246	....	....	....
Min.....	130	225	84	17	28	86	103	95	113	....	....	....
Acre-ft.	20400	23000	25300	3680	5750	11000	9720	14400	11400	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Platte River at Julesburg for 1921

Altitude, 3,469 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	275	190	200	367	1110	110	2020	66	65	394	670	492
2........	275	200	189	324	919	103	1560	52	62	385	639	528
3........	280	200	164	287	668	101	1240	44	67	380	635	473
4........	280	200	151	252	498	127	1060	39	68	374	635	351
5........	270	200	151	226	374	273	964	30	65	390	624	380
6........	280	180	137	172	271	938	580	24	82	357	632	390
7........	250	170	128	165	234	1130	400	26	82	344	564	502
8........	240	160	128	135	203	2350	320	26	84	335	524	492
9........	230	150	124	140	187	15000	280	54	81	344	546	512
10........	240	160	109	157	161	16600	240	72	82	400	532	512
11........	210	170	150	170	180	22300	200	70	61	414	533	500
12........	190	180	151	192	347	25800	190	60	55	468	514	560
13........	260	190	169	164	487	24200	170	48	43	476	499	560
14........	240	180	207	154	486	25700	148	43	40	467	551	570
15........	250	180	207	161	413	30200	134	40	51	481	500	560
16........	200	170	206	185	339	30800	128	39	53	516	509	520
17........	200	160	206	258	240	22000	122	47	64	529	496	500
18........	200	160	206	339	196	14400	116	47	70	556	491	490
19........	220	150	282	330	163	14900	110	43	75	614	457	480
20........	190	170	224	436	135	13500	96	45	72	608	461	480
21........	180	180	185	381	119	10900	92	56	79	593	493	480
22........	190	190	149	308	109	10300	88	52	91	600	502	470
23........	180	190	162	287	95	8180	84	105	109	611	492	460
24........	180	190	179	268	102	6470	84	77	141	619	494	440
25........	170	190	179	291	92	5630	78	62	162	703	470	450
26........	180	200	171	290	118	4350	74	63	225	707	473	470
27........	190	200	175	243	114	3780	74	63	295	722	469	490
28........	190	200	332	203	100	3240	70	65	361	692	480	500
29........	180	....	354	222	105	2760	70	56	366	714	474	490
30........	170	....	424	571	105	2380	68	66	385	686	471	480
31........	180	....	385	....	109	....	66	66	....	657	....	480
Total	6770	5060	6184	7678	8779	318522	10926	1646	3536	16136	15830	15062
Mean..	218	181	199	256	283	10600	352	53.1	118	521	528	486
Max....	....	....	424	571	1110	30800	2020	105	385	722	670	....
Min.....	....	....	109	135	92	101	66	24	40	335	457	....
Acre-ft.	13400	10100	12200	15200	17400	631000	21600	3270	7020	32000	31400	29900

Discharge of South Platte River at Ovid for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	480	500	780	283	818	59	19	14	9	....	....	....
2........	480	520	780	268	790	61	21	15	9	....	....	....
3........	480	580	780	253	781	56	19	15	9	....	....	....
4........	480	640	780	226	614	49	18	15	8	....	....	....
5........	480	700	780	215	480	45	21	14	8	....	....	....
6........	470	760	800	195	509	39	23	14	8	....	....	....
7........	470	760	900	181	430	39	22	16	9	....	....	....
8........	470	760	1000	170	350	32	21	14	10	....	....	....
9........	470	730	1200	149	305	25	22	14	11	....	....	....
10........	467	740	1400	136	276	21	21	15	10	....	....	....
11........	470	740	1640	157	192	21	19	14	8	....	....	....
12........	470	780	1300	165	119	19	18	14	8	....	....	....
13........	430	740	1090	149	114	18	21	13	7	....	....	....
14........	430	720	1000	137	94	19	18	9	8	....	....	....
15........	420	718	896	115	87	19	19	9	9	....	....	....
16........	460	720	762	105	77	19	20	8	10	....	....	....
17........	540	700	598	84	56	22	19	9	14	....	....	....
18........	540	700	515	75	49	21	19	13	18	....	....	....
19........	590	700	448	70	38	18	18	13	17	....	....	....
20........	590	700	412	52	37	19	19	12	17	....	....	....
21........	580	700	362	41	36	21	18	12	17	....	....	....
22........	580	740	352	41	46	16	20	10	16	....	....	....
23........	580	740	323	47	26	17	28	9	15	....	....	....
24........	580	740	310	31	28	18	25	10	15	....	....	....
25........	540	760	298	78	28	18	23	10	15	....	....	....
26........	500	760	274	119	28	17	19	11	14	....	....	....
27........	500	800	288	308	27	19	21	10	15	....	....	....
28........	500	800	278	974	29	18	19	9	15	....	....	....
29........	500	....	323	1140	30	16	20	9	18	....	....	....
30........	500	....	337	1030	53	19	17	8	18	....	....	....
31........	500	....	308	....	45	....	16	8	....	....	....	....
Total	15547	19948	21314	6994	6592	800	623	366	365	....	....	....
Mean..	502	712	688	233	213	26.7	20.1	11.8	12.2	....	....	....
Max....	....	....	1640	1140	818	61	28	16	18	....	....	....
Min.....	....	....	....	31	26	16	16	8	7	....	....	....
Acre-ft.	30900	39500	42300	13900	13100	1590	1240	726	726	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Bear Creek at Starbuck for 1921.

Drainage Area, 111 Square Miles. Altitude, ..., Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	15	16	22	18	287	261	....	190	144	47	19	19
2........	16	16	17	22	309	575	....	200	144	47	19	19
3........	16	15	17	24	335	678	....	180	133	47	19	19
4........	16	14	19	22	357	516	....	180	133	47	19	21
5........	15	13	21	22	368	362	....	180	133	47	19	24
6........	15	13	21	22	357	398	....	160	113	47	19	30
7........	15	13	18	19	343	362	....	160	113	47	19	36
8........	15	13	16	15	318	348	....	140	113	42	19	33
9........	15	13	18	23	304	370	....	130	94	36	12	29
10........	15	13	19	18	270	362	....	140	94	36	12	23
11........	14	15	12	25	268	368	....	140	94	36	12	22
12........	14	18	13	25	268	379	....	160	94	36	12	22
13........	14	21	16	22	270	362	....	160	94	36	12	22
14........	14	25	13	31	279	362	....	160	94	36	12	22
15........	16	29	16	11	287	460	....	175	104	31	12	22
16........	16	33	13	9	278	330	....	180	85	26	12	22
17........	16	33	17	31	278	320	....	237	76	26	12	22
18........	16	29	16	58	292	300	....	176	76	26	14	22
19........	16	25	18	66	278	300	....	165	76	26	14	22
20........	15	25	13	77	258	270	....	154	76	26	22	22
21........	15	25	18	95	258	260	....	144	68	22	31	22
22........	15	29	14	151	258	260	....	154	61	19	42	22
23........	16	21	18	259	256	250	....	154	61	19	47	19
24........	16	18	16	295	258	236	....	165	47	19	42	17
25........	14	25	18	256	256	225	....	290	47	26	31	17
26........	15	25	22	226	253	225	....	144	47	22	26	19
27........	15	25	15	206	250	220	....	133	47	19	22	20
28........	17	21	16	190	261	210	....	113	47	19	22	20
29........	18	....	18	206	264	200	....	113	47	19	22	20
30........	16	....	19	251	253	190	....	332	47	19	19	20
31........	16	....	14	....	264	....	....	133	....	19	....	20
Total	477	581	523	2696	8835	9959	....	5242	2602	970	614	689
Mean..	15.4	20.8	16.9	89.9	285	332	195	169	86.7	31.3	20.5	22.2
Max....	....	33	22	296	368	678	....	....	144	47	47	....
Min.....	....	13	12	9	250	....	....	113	47	19	12	....
Acre-ft.	947	1160	1040	5350	17500	19800	12000	10400	5160	1920	1220	1360

Discharge of Bear Creek at Starbuck for 1922.

Drainage Area, 111 Square Miles. Altitude, Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	18	14	16	26	106	104	81	70	71	....	....	....
2........	18	14	18	27	104	104	83	135	67	....	....	....
3........	18	14	20	23	100	102	71	135	65	....	....	....
4........	18	16	22	29	100	98	59	100	70	....	....	....
5........	18	16	22	28	108	92	55	130	65	....	....	....
6........	19	16	22	23	112	98	57	130	61	....	....	....
7........	19	18	24	22	114	108	62	105	59	....	....	....
8........	19	18	24	24	104	110	54	80	59	....	....	....
9........	19	18	26	24	100	104	49	80	59	....	....	....
10........	19	18	26	22	100	96	51	65	57	....	....	....
11........	20	16	26	26	91	91	58	65	55	....	....	....
12........	20	16	24	28	78	91	51	75	51	....	....	....
13........	20	16	22	26	73	91	46	75	48	....	....	....
14........	20	16	22	30	73	91	43	85	46	....	....	....
15........	19	16	20	37	81	85	40	70	55	....	....	....
16........	18	18	21	30	78	83	39	70	54	....	....	....
17........	17	18	22	26	79	89	37	70	47	....	....	....
18........	17	18	17	29	85	79	37	100	48	....	....	....
19........	16	18	23	39	102	76	37	106	43	....	....	....
20........	10	18	23	40	96	73	38	112	43	....	....	....
21........	10	18	23	48	102	70	41	118	43	....	....	....
22........	12	17	21	59	96	68	64	104	44	....	....	....
23........	12	16	28	64	100	70	41	90	42	....	....	....
24........	12	16	29	73	104	70	38	87	42	....	....	....
25........	14	18	36	73	116	81	36	79	41	....	....	....
26........	14	18	28	85	100	92	33	78	41	....	....	....
27........	14	16	25	96	106	67	40	78	42	....	....	....
28........	14	16	18	96	96	62	70	78	39	....	....	....
29........	12	....	20	91	104	68	95	90	36	....	....	....
30........	12	....	25	94	104	75	86	87	35	....	....	....
31........	12	....	20	....	104	....	60	78	....	....	....	....
Total	500	467	713	1338	3016	2588	1652	2825	1528	....	....	....
Mean..	16.1	16.7	23	44.6	97.3	86.3	53.3	91.1	50.9	....	....	....
Max....	....	....	36	96	116	110	95	135	71	....	....	....
Min.....	....	....	....	22	73	62	33	65	35	....	....	....
Acre-ft.	990	928	1410	2650	5980	5140	3280	5600	3030	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Clear Creek near Golden for 1921.

Drainage Area, 380 Square Miles. Altitude, 5,620 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	61	67	354	1370	1060	578	314	123	88	74
2	....	....	59	67	439	1300	935	498	299	126	84	76
3	....	....	58	67	535	1240	935	498	283	126	86	67
4	....	....	57	70	668	1690	820	411	274	121	84	43
5	....	....	55	72	620	1830	715	360	265	116	82	59
6	....	....	54	70	670	2110	1180	330	244	116	82	76
7	....	....	53	62	690	2250	620	304	236	133	97	65
8	....	....	50	59	600	2320	620	299	214	133	97	53
9	....	....	55	67	550	2950	668	283	207	116	84	45
10	....	....	62	66	520	2950	668	294	204	106	88	47
11	....	....	70	69	500	2950	668	299	200	102	99	55
12	....	....	64	76	498	2950	620	253	194	99	104	75
13	....	....	66	74	366	3020	668	283	187	97	76	88
14	....	....	62	88	425	2670	768	309	178	97	72	76
15	....	....	69	94	498	2570	768	314	174	94	72	74
16	....	....	72	118	668	2530	820	294	178	97	69	86
17	....	....	69	168	820	2450	878	249	174	99	70	43
18	....	....	70	151	820	2350	878	232	171	99	70	42
19	....	....	69	171	820	2170	878	236	168	97	59	38
20	....	....	74	218	715	1850	935	244	160	97	84	38
21	....	....	69	214	715	1600	840	257	140	94	123	38
22	....	....	70	253	1060	1430	820	261	130	97	99	38
23	....	....	72	384	1060	1390	820	330	128	102	94	38
24	....	....	64	446	995	1400	768	320	126	109	80	40
25	....	....	72	330	995	1430	715	314	133	106	84	45
26	....	....	78	274	935	1430	715	299	135	102	82	50
27	....	....	66	244	878	1400	620	299	130	99	72	55
28	....	....	62	222	1060	1340	578	302	126	99	82	64
29	....	....	70	222	1060	1300	498	304	121	102	80	75
30	....	....	76	274	1180	1060	460	320	126	84	78	94
31	....	....	62	....	1370	....	768	309	....	86	....	67
Total	....	....	2010	4757	23084	59300	23704	9883	5619	3274	2521	1824
Mean	65	55	64.8	159	745	1980	765	319	187	106	84.0	58.8
Max	....	....	78	446	1370	3020	1180	578	314	133	123	94
Min	....	....	50	59	354	1060	460	232	121	84	59	38
Acre-ft.	4000	3050	3980	9460	45800	118000	47000	19600	11100	6520	5000	3620

Discharge of Clear Creek near Golden for 1922.

Drainage Area, 380 Square Miles. Altitude, 5,620 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	149	455	590	240	183	....	....	....
2	....	....	....	....	140	455	520	310	176	....	....	....
3	....	....	....	....	149	455	455	260	166	....	....	....
4	....	....	....	....	161	425	455	225	163	....	....	....
5	....	....	....	....	196	455	425	232	152	....	....	....
6	....	....	....	....	223	488	425	235	135	....	....	....
7	....	....	....	....	193	455	395	200	124	....	....	....
8	....	....	....	....	193	620	351	188	122	....	....	....
9	....	....	....	....	227	800	330	182	119	....	....	....
10	....	....	....	....	203	750	395	179	117	....	....	....
11	....	....	....	....	193	708	351	183	114	....	....	....
12	....	....	....	....	207	665	294	179	110	....	....	....
13	....	....	....	....	157	750	280	176	110	....	....	....
14	....	....	....	49	152	1060	284	172	127	....	....	....
15	....	....	....	59	160	950	284	169	88	....	....	....
16	....	....	....	61	143	798	284	160	88	....	....	....
17	....	....	....	50	152	798	284	193	76	....	....	....
18	....	....	....	47	179	798	275	280	107	....	....	....
19	....	....	....	56	219	798	248	248	96	....	....	....
20	....	....	....	64	231	845	252	243	96	....	....	....
21	....	....	....	76	266	845	252	207	92	....	....	....
22	....	....	....	94	252	845	257	243	92	....	....	....
23	....	....	....	101	280	798	231	227	87	....	....	....
24	56	....	....	96	330	798	215	200	87	....	....	....
25	....	....	....	92	395	708	215	193	83	....	....	....
26	....	....	....	112	425	708	235	186	85	....	....	....
27	....	....	....	110	520	665	252	179	83	....	....	....
28	....	....	....	103	520	590	271	183	81	....	....	....
29	....	....	....	132	590	590	309	176	119	....	....	....
30	....	....	....	143	665	590	227	207	78	....	....	....
31	....	....	....	....	520	....	210	179	....	....	....	....
Total	....	....	....	1445	8390	20665	9851	6434	3356	....	....	....
Mean	....	....	....	85.0	271	689	318	208	112	....	....	....
Max	....	....	....	143	665	1060	590	310	183	....	....	....
Min	....	....	....	47	140	425	210	160	76	....	....	....
Acre-ft.	....	....	....	2870	16700	41000	19600	12800	6660	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Boulder Creek at Eldorado Springs for 1921.

Drainage Area, 113 Square Miles. Altitude, 5,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	17	28	316	523	306	117	28	8	9	4
2	....	....	17	28	367	507	270	114	39	10	4	4
3	....	....	22	28	413	454	235	84	33	9	5	4
4	....	....	22	28	453	534	249	68	28	6	6	3
5	....	....	27	28	477	600	238	47	27	6	1	3
6	....	....	27	28	481	784	200	54	19	7	1	3
7	....	....	27	26	488	1050	196	41	18	15	1	3
8	....	....	26	25	260	846	190	37	18	17	1	2
9	....	....	26	25	377	892	177	30	18	14	1	2
10	....	....	29	25	273	965	174	33	17	11	1	4
11	....	....	27	28	262	930	162	34	17	10	2	6
12	....	....	27	28	288	865	162	33	16	9	2	8
13	....	....	27	28	291	916	187	30	16	9	2	11
14	....	....	29	31	298	820	177	43	17	9	2	9
15	....	....	28	16	320	830	194	47	16	9	2	7
16	....	....	28	14	320	874	185	24	16	9	2	5
17	....	....	30	38	332	800	210	25	16	8	2	5
18	....	....	28	38	378	664	222	21	15	7	2	5
19	....	....	33	179	380	557	176	19	16	12	2	5
20	....	....	33	193	381	511	133	22	16	10	7	5
21	....	....	33	202	378	461	114	24	12	10	10	5
22	....	....	33	225	378	414	148	29	13	10	6	5
23	....	....	33	310	388	414	129	35	13	10	5	5
24	....	....	33	345	390	414	109	51	12	11	4	5
25	....	....	33	251	390	414	94	72	11	15	5	5
26	....	....	33	220	388	390	78	87	9	12	6	5
27	....	....	31	202	408	356	131	56	8	12	7	5
28	....	....	30	184	466	348	87	53	10	10	7	5
29	....	....	29	183	448	327	76	46	6	10	7	5
30	....	....	29	241	444	318	68	51	6	10	6	5
31	....	....	29	....	502	....	65	54	....	8	....	5
Total	....	....	876	3225	11735	18778	5142	1481	506	513	118	153
Mean..	....	....	28.3	108	379	626	166	47.8	16.9	16.5	3.93	4.94
Max	....	....	33	345	502	1050	306	117	39	17	10	....
Min.	....	....	17	14	260	318	65	19	6	6	1	....
Acre-ft.	....	....	1740	6420	23300	37200	10200	2940	1010	1010	234	304

Discharge of South Boulder Creek at Eldorado Springs for 1922.

Drainage Area, 125 Square Miles. Altitude, 5,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	24	107	197	141	37	20	....	....	....
2	....	....	....	30	106	182	116	47	17	....	....	....
3	....	....	....	30	110	190	98	40	17	....	....	....
4	....	....	....	29	109	169	87	43	18	....	....	....
5	....	....	....	29	120	179	87	30	23	....	....	....
6	....	....	....	29	148	207	96	31	21	....	....	....
7	....	....	....	29	148	219	104	30	21	....	....	....
8	....	....	....	28	140	237	75	28	11	....	....	....
9	....	....	....	25	152	271	72	19	11	....	....	....
10	....	....	....	20	137	138	85	18	11	....	....	....
11	....	....	....	19	72	262	77	21	12	....	....	....
12	....	....	....	21	56	287	73	20	11	....	....	....
13	....	....	....	31	70	284	60	18	12	....	....	....
14	....	....	....	30	95	320	56	17	11	....	....	....
15	....	....	....	28	85	284	53	16	12	....	....	....
16	....	....	....	26	85	249	48	16	12	....	....	....
17	....	....	....	27	77	213	53	16	11	....	....	....
18	....	....	....	30	107	225	44	46	11	....	....	....
19	....	....	....	30	143	215	41	47	10	....	....	....
20	....	....	....	31	128	212	42	40	10	....	....	....
21	....	....	....	31	158	200	79	34	9	....	....	....
22	....	....	....	30	136	203	78	35	10	....	....	....
23	....	....	....	45	146	186	57	27	11	....	....	....
24	....	....	....	50	190	185	50	21	11	....	....	....
25	....	....	....	53	231	182	38	18	11	....	....	....
26	....	....	....	70	252	171	35	21	11	....	....	....
27	....	....	....	78	259	158	36	21	11	....	....	....
28	....	....	....	87	243	138	38	24	13	....	....	....
29	....	....	....	89	256	140	42	21	12	....	....	....
30	....	....	22	83	280	160	35	25	13	....	....	....
31	....	....	22	....	227	....	35	21	....	....	....	....
Total	....	....	....	1162	4573	6263	2031	848	394	....	....	....
Mean..	....	....	....	38.7	148	209	65.5	27.4	13.1	....	....	....
Max....	....	....	....	89	280	320	141	47	23	....	....	....
Min.....	....	....	....	19	56	138	35	16	9	....	....	....
Acre-ft.	....	....	....	2300	9100	12400	4030	1680	780	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Boulder Creek near Orodell for 1921.

Drainage Area, 105 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	15	39	19	26	125	336	508	256	73	14	15	18
2........	25	57	34	18	144	604	485	200	68	13	14	18
3........	27	34	33	17	187	639	457	177	71	14	13	15
4........	26	34	31	13	198	547	410	158	62	15	14	20
5........	34	39	26	54	205	765	410	150	46	20	14	27
6........	47	15	5	39	216	950	372	125	47	19	14	36
7........	35	32	13	26	256	1180	315	108	47	28	13	60
8........	47	32	42	26	194	1020	235	106	52	24	14	48
9........	32	30	34	25	172	960	261	84	53	21	14	47
10........	42	26	47	15	184	1090	235	93	40	21	15	53
11........	43	17	52	33	152	1160	235	104	47	21	14	41
12........	43	34	34	47	141	1150	256	104	42	20	14	38
13........	43	18	31	36	154	1170	280	101	41	20	16	37
14........	33	35	28	48	175	1160	315	110	38	21	17	51
15........	30	32	35	11	123	1150	315	123	38	23	17	24
16........	30	29	27	16	146	1170	332	110	38	21	15	27
17........	40	30	28	22	146	1120	360	104	44	20	15	34
18........	46	28	29	50	184	1090	360	102	57	21	14	32
19........	47	18	25	66	157	960	391	88	36	21	14	36
20........	51	19	18	81	133	755	354	86	34	20	18	39
21........	29	28	29	76	152	737	299	73	38	18	30	39
22........	44	32	32	98	141	579	310	78	31	19	21	43
23........	31	35	34	135	178	523	304	76	28	18	29	36
24........	20	39	25	130	191	457	275	84	33	18	25	79
25........	30	44	25	92	216	464	261	137	36	57	31	43
26........	36	25	24	75	194	554	214	155	24	36	26	31
27........	40	16	10	81	184	554	187	116	30	13	27	44
28........	34	15	20	75	184	539	204	74	25	13	22	50
29........	34	....	18	63	166	515	163	74	28	12	16	49
30........	19	....	28	90	166	500	155	69	26	15	15	41
31........	39	....	26	....	354	....	169	84	....	14	....	29
Total	1092	832	862	1584	5518	24398	9427	3509	1273	630	536	1185
Mean..	35.2	29.7	27.8	52.8	178	813	304	113	42.4	20.3	17.9	38.2
Max....	51	57	52	135	354	1180	508	256	73	57	31	79
Min.....	15	15	5	11	123	336	155	69	24	12	13	15
Acre-ft.	2160	1650	1710	3140	10900	48400	18700	6950	2520	1250	1070	2350

Discharge of Boulder Creek near Orodell for 1922.

Drainage Area, 105 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	27	40	42	127	74	207	336	109	42	....	....	....
2........	37	56	46	106	77	178	233	104	46	....	....	....
3........	70	50	42	147	75	210	218	115	34	....	....	....
4........	62	38	50	181	68	218	221	109	34	....	....	....
5........	54	26	26	191	86	229	237	98	45	....	....	....
6........	72	36	33	175	98	290	269	134	35	....	....	....
7........	90	39	37	170	70	299	256	113	34	....	....	....
8........	48	43	36	161	88	336	194	109	30	....	....	....
9........	70	34	38	111	75	347	184	104	37	....	....	....
10........	68	50	39	120	70	372	233	113	25	....	....	....
11........	48	34	40	139	84	357	210	94	25	....	....	....
12........	49	32	88	175	67	372	194	80	24	....	....	....
13........	50	43	88	150	65	418	181	59	21	....	....	....
14........	38	49	88	142	34	455	156	68	23	....	....	....
15........	58	45	88	167	77	496	142	54	24	....	....	....
16........	53	34	88	104	90	509	124	58	24	....	....	....
17........	88	31	104	117	80	482	132	53	24	....	....	....
18........	90	33	117	127	98	462	132	60	25	....	....	....
19........	91	21	100	132	134	462	142	54	24	....	....	....
20........	92	24	164	181	137	455	140	43	22	....	....	....
21........	94	34	84	142	140	468	147	53	20	....	....	....
22........	43	26	98	53	140	482	142	68	21	....	....	....
23........	33	37	113	33	150	475	145	68	19	....	....	....
24........	40	37	142	52	240	442	129	52	20	....	....	....
25........	70	38	153	62	327	424	102	48	20	....	....	....
26........	50	34	86	56	367	418	90	38	20	....	....	....
27........	45	33	139	50	341	341	82	35	20	....	....	....
28........	39	29	109	46	346	299	82	53	19	....	....	....
29........	37	....	104	50	378	304	88	56	17	....	....	....
30........	37	....	120	42	412	331	84	50	19	....	....	....
31........	67	....	107	....	357	....	94	58	....	....	....	....
Total	1810	1026	2609	3509	4845	11138	5119	2310	793	....	....	....
Mean..	58.4	36.6	84.2	117	156	371	165	74.5	26.4	....	....	....
Max....	94	56	153	191	412	509	336	134	46	....	....	....
Min.....	27	21	26	33	34	178	82	35	17	....	....	....
Acre-ft.	3590	2030	5180	6960	9590	22100	10100	4580	1570	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of St. Vrain Creek at Lyons for 1921.

Drainage Area, 209 Square Miles. Altitude, 5,349 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	De
1........	6	10	6	15	414	674	570	310	168	33	20	2
2........	10	15	10	25	466	622	518	388	137	33	20	
3........	10	15	6	20	518	570	544	222	152	33	20	1
4........	15	10	10	25	570	1180	544	203	137	21	20	1
5........	15	10	25	32	596	1420	466	184	85	16	20	1
6........	15	10	20	32	596	1840	362	203	76	17	20	2
7........	20	15	20	32	570	2020	310	152	76	28	20	2
8........	20	15	20	15	518	1720	310	184	66	22	20	3
9........	20	20	4	20	414	1750	288	168	66	22	20	2
10........	15	20	3	25	336	1720	310	152	66	17	15	2
11........	15	20	4	32	310	1720	288	184	89	18	15	2
12........	20	20	4	25	266	1660	310	152	89	18	15	3
13........	15	10	6	32	266	1480	518	152	78	18	15	2
14........	20	15	6	38	288	1480	466	203	70	18	15	2
15........	15	15	20	222	266	1540	570	184	70	13	15	2
16........	15	10	25	64	310	1360	466	184	70	19	15	
17........	10	15	25	96	310	1300	388	152	70	19	15	
18........	15	10	20	152	414	1120	414	152	70	14	10	
19........	15	15	20	288	388	885	414	137	70	14	6	
20........	20	15	20	362	266	752	388	152	60	14	10	1
21........	20	10	20	336	288	700	336	152	62	20	15	2
22........	25	10	20	336	310	622	466	152	62	20	15	3
23........	10	6	25	570	310	622	414	152	62	15	15	2
24........	15	4	15	622	362	622	414	152	52	15	15	1
25........	15	4	20	414	414	570	362	152	44	15	15	1
26........	20	3	15	310	310	570	288	152	54	20	15	2
27........	15	4	10	222	362	570	266	137	54	15	12	2
28........	15	4	15	222	414	570	266	122	25	20	20	2
29........	15	....	20	362	518	544	203	122	25	20	20	2
30........	15	....	25	222	466	570	222	122	38	15	20	1
31........	10	....	20	....	674	....	222	152	....	15	....	2
Total	481	330	479	5168	12510	32773	11903	5385	2243	597	488	56
Mean..	15.5	11.8	15.5	172	404	1090	384	174	74.8	19.3	16.3	18
Max....	25	20	25	622	674	2020	570	388	168	33	20	3
Min....	6	3	3	15	266	544	203	112	25	13	6	
Acre-ft.	953	655	953	10200	24800	64900	23600	10700	4450	1190	970	113

Discharge of St. Vrain Creek at Lyons for 1922.

Drainage Area, 206 Square Miles. Altitude, 5,349 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	De
1........	18	1	4	26	112	241	302	154	71	....	....	....
2........	18	4	9	26	112	222	281	171	62	....	....	....
3........	18	2	12	26	90	241	222	139	55	....	....	....
4........	22	4	12	31	100	222	241	112	55	....	....	....
5........	18	2	12	42	112	222	222	110	55	....	....	....
6........	15	2	26	42	100	302	241	112	62	....	....	....
7........	12	4	22	36	139	328	260	100	48	....	....	....
8........	12	6	12	31	100	410	205	100	42	....	....	....
9........	15	6	12	36	124	507	205	90	42	....	....	....
10........	18	9	12	26	112	442	241	80	42	....	....	....
11........	22	6	12	26	100	442	188	80	36	....	....	....
12........	18	6	15	22	112	474	188	71	26	....	....	....
13........	15	6	15	22	100	574	154	71	26	....	....	....
14........	15	9	15	26	100	540	154	62	26	....	....	....
15........	15	12	15	26	90	442	139	62	26	....	....	....
16........	12	12	15	31	90	382	154	62	31	....	....	....
17........	12	9	12	31	90	382	154	80	26	....	....	....
18........	9	9	18	31	112	328	154	62	26	....	....	....
19........	0	6	18	22	124	410	124	100	26	....	....	....
20........	0	9	18	18	124	442	139	100	26	....	....	....
21........	4	9	12	36	139	410	124	90	26	....	....	....
22........	2	6	4	48	124	442	154	80	26	....	....	....
23........	2	2	2	62	124	410	139	90	22	....	....	....
24........	4	6	2	55	171	410	139	90	22	....	....	....
25........	2	6	4	62	260	382	112	90	22	....	....	....
26........	2	4	4	62	328	410	100	80	22	....	....	....
27........	6	9	6	80	302	354	100	71	22	....	....	....
28........	6	9	15	80	328	302	100	62	22	....	....	....
29........	2	....	26	100	354	302	154	62	22	....	....	....
30........	4	....	26	124	410	302	154	62	22	....	....	....
31........	2	....	26	....	302	....	171	62	....	....	....	....
Total	320	175	413	1286	4985	11277	5415	2747	1037	....	....	....
Mean..	10.3	6.25	13.3	42.9	161	376	175	88.6	34.6	....	....	....
Max....	22	12	26	124	410	574	302	171	71	....	....	....
Min.....	0	1	2	18	90	222	100	62	22	....	....	....
Acre-ft.	633	347	818	2550	9900	22400	10800	5450	2060	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Big Thompson River, near Drake for 1921.

Drainage Area, 305 Square Miles. Altitude, 6,100 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	....	31	245	1000	730	305	275	70	51	36
2........	....	....	....	29	270	962	810	380	245	69	48	36
3........	....	....	....	31	332	950	730	380	232	69	44	35
4........	....	....	....	36	375	1400	580	340	140	69	44	33
5........	35	....	....	41	435	1570	580	305	131	63	44	33
6........	....	....	....	44	483	2500	520	305	122	75	43	33
7........	....	....	....	35	523	3000	520	275	122	82	40	33
8........	....	24	....	26	400	2050	495	275	105	89	31	36
9........	....	....	....	34	386	2000	470	245	140	75	25	33
10........	....	....	....	31	341	2000	470	275	140	75	25	61
11........	....	....	....	36	317	1990	470	275	140	69	34	48
12........	....	....	....	38	311	1940	580	275	131	63	44	51
13........	23	....	....	43	317	1880	730	245	122	69	41	48
14........	....	....	....	49	326	1890	580	275	122	63	40	36
15........	....	....	....	43	362	1920	580	305	105	63	37	37
16........	....	....	....	22	365	1810	650	275	140	63	31	36
17........	....	....	33	68	379	1810	650	257	140	58	29	22
18........	....	....	33	104	335	1680	650	245	140	53	31	13
19........	....	....	31	131	479	1320	730	245	150	53	33	17
20........	....	....	32	198	414	1100	650	245	140	53	49	17
21........	....	....	29	196	404	810	615	245	130	53	57	17
22........	....	....	30	242	421	810	650	245	125	48	48	17
23........	....	....	31	391	447	810	730	245	122	48	44	17
24........	....	....	29	411	573	855	650	245	122	48	44	17
25........	....	21	31	305	604	900	580	305	120	53	43	17
26........	....	....	32	252	555	900	460	275	120	53	35	36
27........	....	....	25	210	560	1000	470	245	110	48	24	36
28........	....	....	25	190	675	900	470	245	100	48	31	36
29........	....	....	32	180	784	900	420	245	90	44	29	36
30........	....	....	31	200	794	810	380	245	80	48	35	36
31........	27	....	28	....	1040	....	305	245	....	51	....	36
Total	775	616	806	3647	14252	43467	17905	8512	4101	1885	1154	995
Mean..	25	22	26	122	460	1450	578	275	137	60 8	38.5	32 1
Max....	....	....	....	411	1040	3000	810	380	275	89	57	51
Min.....	....	....	....	22	245	810	305	245	80	44	24	....
Acre-ft.	1540	1220	1600	7260	28300	86300	35500	16900	8150	3740	2290	1970

Discharge of Big Thompson River near Drake for 1922.

Drainage Area, 305 Square Miles. Altitude, 6,100 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	38	26	24	25	156	435	565	290	198	....	....	....
2........	44	24	23	39	156	388	565	410	156	....	....	....
3........	36	24	23	35	156	435	510	260	130	....	....	....
4........	20	22	25	53	156	410	435	260	115	....	....	....
5........	20	20	25	59	176	435	460	410	122	....	....	....
6........	21	20	25	51	235	595	435	248	115	....	....	....
7........	23	19	24	37	275	625	435	222	115	....	....	....
8........	37	20	23	40	248	765	365	235	119	....	....	....
9........	43	24	25	46	260	945	345	222	92	....	....	....
10........	44	38	31	39	248	850	325	204	90	....	....	....
11........	46	35	29	32	210	765	290	176	80	....	....	....
12........	37	25	29	40	187	765	275	166	80	....	....	....
13........	32	20	31	37	176	850	235	166	80	....	....	....
14........	31	30	31	34	156	945	235	166	78	....	....	....
15........	37	37	35	38	147	850	235	176	78	....	....	....
16........	38	36	29	41	147	728	260	166	71	....	....	....
17........	28	35	31	38	147	625	260	187	71	....	....	....
18........	28	36	32	30	198	625	260	198	69	....	....	....
19........	28	36	34	35	275	690	260	235	71	....	....	....
20........	28	33	31	39	275	765	260	222	67	....	....	....
21........	28	35	34	52	308	690	260	235	61	....	....	....
22........	28	31	34	65	275	728	275	198	61	....	....	....
23........	28	30	35	71	308	690	235	187	61	....	....	....
24........	36	30	38	71	388	765	222	176	60	....	....	....
25........	41	29	33	76	460	690	222	166	58	....	....	....
26........	44	27	34	97	510	625	222	166	58	....	....	....
27........	49	26	38	121	595	595	222	166	58	....	....	....
28........	40	24	31	116	625	595	345	147	58	....	....	....
29........	34	....	27	128	728	565	388	156	57	....	....	....
30........	31	....	24	147	728	690	388	156	57	....	....	....
31........	29	....	25	....	538	....	222	147	....	....	....	....
Total	1047	792	913	1732	9447	20124	10011	6519	2579	....	....	....
Mean..	33.8	28.3	29.5	57.7	305	671	323	210	86.0	....	....	....
Max....	49	38	38	147	728	945	565	410	198	....	....	....
Min.....	....	19	23	25	147	388	222	147	57	....	....	....
Acre-ft.	2080	1570	1810	3430	18800	39900	19900	12900	5120	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cache La Poudre River at Mouth of Canon for 1921.

Drainage Area, 1,060 Square Miles. Altitude, 5,070 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38	31	30	40	366	3270	1740	566	434	75	63	58
2	38	31	30	50	421	2660	1720	755	428	73	64	64
3	37	31	30	58	542	2780	1680	542	441	67	63	69
4	37	31	30	64	606	3850	1510	467	396	64	64	63
5	37	30	30	78	606	3480	1410	415	354	63	61	58
6	37	30	30	95	692	3340	1300	421	378	64	59	61
7	36	30	30	82	900	3620	1130	454	396	71	59	67
8	36	30	30	67	773	4680	1110	441	396	80	61	65
9	32	29	30	73	675	4520	1300	408	414	75	63	63
10	31	28	30	73	640	4450	1020	378	280	75	50	62
11	30	30	35	67	606	4450	1020	348	180	75	59	61
12	31	30	40	78	590	4450	990	366	163	71	63	60
13	31	30	48	88	622	4080	1210	348	154	69	61	59
14	32	30	49	90	900	3700	1090	474	166	69	59	58
15	33	31	47	160	1160	4220	1080	542	160	69	61	58
16	33	31	47	122	1240	3700	1140	448	140	69	63	56
17	34	31	49	134	1520	3270	1060	408	127	67	59	54
18	34	31	47	148	1840	2920	1000	360	127	64	58	52
19	33	31	50	184	1690	2590	1020	330	124	64	52	50
20	32	31	55	280	1570	2170	890	348	124	64	56	54
21	32	31	61	302	1640	2040	820	342	115	63	69	54
22	32	31	61	325	1890	1940	810	302	110	64	80	54
23	29	31	58	454	1970	1950	1120	290	110	63	73	48
24	29	31	56	640	2230	2040	970	307	106	59	61	46
25	28	31	50	508	2200	2070	810	331	99	66	56	46
26	28	31	55	441	1840	2030	719	307	90	69	61	42
27	27	31	50	396	1800	1970	684	270	84	66	50	44
28	27	31	47	372	2240	1940	574	245	80	67	55	48
29	26	....	55	325	2400	1920	515	219	73	66	59	48
30	29	....	53	319	2430	1820	501	319	73	73	59	48
31	31	....	49	....	2780	....	508	396	....	66	....	48
Total	1000	855	1362	6113	41379	91920	32451	12147	6322	2110	1821	1718
Mean	32.3	30.5	43.9	204	1330	3060	1050	392	211	68.1	60.7	55.4
Max	....	....	61	640	2780	4680	1740	755	434	80	80	....
Min	....	....	....	40	366	1820	501	245	73	59	50	....
Acre-ft.	1990	1690	2700	12100	81800	182000	64600	24100	12600	4190	3610	3410

Discharge of Cache La Poudre at Mouth of Canon for 1922

Drainage Area, 1,060 Square Miles. Altitude, 5,070 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46	25	27	38	208	1340	810	258	177	....	....	....
2	43	25	27	61	204	1380	602	274	160	....	....	....
3	41	25	28	61	200	1440	528	296	146	....	....	....
4	38	25	30	58	208	1350	466	285	146	....	....	....
5	35	25	31	72	220	1360	512	263	140	....	....	....
6	36	26	31	70	279	1700	520	244	138	....	....	....
7	37	27	31	78	367	1770	520	212	132	....	....	....
8	38	28	32	67	336	1940	437	234	113	....	....	....
9	39	29	32	80	318	1990	386	268	104	....	....	....
10	39	31	33	94	313	2100	386	285	96	....	....	....
11	40	30	33	86	296	1970	424	313	90	....	....	....
12	39	30	33	86	239	1940	380	330	88	....	....	....
13	38	29	33	96	234	2160	355	313	88	....	....	....
14	37	28	33	90	230	2210	343	318	86	....	....	....
15	35	27	33	88	216	1820	336	336	84	....	....	....
16	32	26	36	101	188	1580	313	239	82	....	....	....
17	30	27	38	106	173	1560	313	230	76	....	....	....
18	26	28	40	86	249	1680	279	274	74	....	....	....
19	22	29	38	86	418	1680	274	196	69	....	....	....
20	20	29	36	86	458	1720	307	184	61	....	....	....
21	21	29	38	92	646	1620	307	216	60	....	....	....
22	22	29	38	106	628	1540	302	313	54	....	....	....
23	22	30	38	113	780	1480	279	418	53	....	....	....
24	22	31	37	124	1150	1460	263	399	54	....	....	....
25	23	30	36	135	1500	1360	263	418	54	....	....	....
26	25	29	35	132	1580	1180	254	399	54	....	....	....
27	25	28	45	177	1840	1030	230	399	54	....	....	....
28	26	27	53	173	1940	960	263	528	56	....	....	....
29	27	....	53	184	2030	930	355	594	58	....	....	....
30	26	....	50	200	1900	940	324	544	60	....	....	....
31	25	....	50	....	1480	....	254	324	....	....	....	....
Total	975	782	1128	3016	20828	47190	11585	9904	2707	....	....	....
Mean	31.5	27.9	36.4	101	672	1570	374	319	90.2	....	....	....
Max	....	....	....	200	2030	2210	810	594	177	....	....	....
Min	....	....	....	38	200	930	230	184	53	....	....	....
Acre-ft.	1940	1550	2240	6010	41300	93400	23000	19600	5370	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Platte River near North Gate for 1921.
Drainage Area, 1,440 Square Miles. Altitude, 7,600 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	1120	2730	1190	600	458	165	208	......
2	......	......	......	......	1140	2730	1100	630	416	165	204	......
3	......	......	......	......	1210	2650	1040	650	375	165	196	......
4	......	......	......	......	1330	2650	990	630	355	165	192	......
5	......	......	......	......	1530	3050	1180	620	340	165	196	......
6	......	......	......	......	1790	3370	1150	600	325	171	180	......
7	......	......	......	......	2060	3800	1110	593	310	196	184	......
8	......	......	......	......	2060	4360	880	572	295	204	184	......
9	......	......	......	......	1920	4360	752	551	280	184	208	......
10	......	......	......	......	1450	4170	698	572	265	168	208	......
11	......	......	......	......	1250	4170	700	608	252	165	208	......
12	......	......	......	......	1120	4080	750	565	236	168	208	......
13	......	......	......	......	1190	4260	750	530	224	168	188	......
14	......	......	......	......	1280	4550	720	565	220	168	174	......
15	......	......	......	......	1410	5310	700	640	220	168	174	......
16	......	......	......	......	1670	6070	800	579	216	166	......	......
17	......	......	......	......	1790	6260	1100	488	216	165	......	......
18	......	......	......	......	1790	5120	1040	422	212	159	......	......
19	......	......	......	......	1920	3800	1130	380	240	156	......	......
20	......	......	......	......	1720	3050	980	360	244	153	......	......
21	......	......	......	......	1260	2350	860	360	232	153	......	......
22	......	......	......	......	1200	1920	960	360	216	150	......	......
23	......	......	......	632	1360	1790	1050	395	204	144	......	......
24	......	......	......	680	1530	1720	1180	476	236	141	......	......
25	......	......	......	680	1720	1720	970	482	188	184	......	......
26	......	......	......	620	1990	1720	870	464	180	212	......	......
27	......	......	......	580	2060	1600	833	446	177	208	......	......
28	......	......	......	544	2060	1490	698	422	171	192	......	......
29	......	......	......	530	2200	1410	648	428	168	188	......	......
30	......	......	......	632	2420	1300	624	452	162	212	......	......
31	......	......	......	......	2650	......	565	446	......	212	......	......
Total	......	......	......	4898	51200	97560	28018	15886	7633	5380	2882	......
Mean	......	......	......	612	1650	3250	904	512	254	174	192	......
Max	......	......	......	680	2650	6260	1190	650	458	212	......	......
Min	......	......	......	530	1120	1300	565	360	162	141	......	......
Acre-ft.	......	......	......	9710	101000	193000	55600	31500	15100	10700	5710	......

Discharge of North Platte River Near North Gate for 1922
Drainage Area, 1,440 Square Miles. Altitude, 7,600 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	1270	1050	600	141	119	......	......	......
2	......	......	......	......	1170	910	538	173	133	......	......	......
3	......	......	......	......	1130	861	518	182	133	......	......	......
4	......	......	......	......	1180	1060	518	173	133	......	......	......
5	......	......	......	......	1220	1060	574	157	130	......	......	......
6	......	......	......	......	1430	1150	497	147	122	......	......	......
7	......	......	......	......	1510	1280	432	139	114	......	......	......
8	......	......	......	......	1530	1360	325	133	114	......	......	......
9	......	......	......	......	1460	1530	268	125	117	......	......	......
10	......	......	......	......	1330	1730	258	122	119	......	......	......
11	......	......	......	......	1100	1800	242	125	119	......	......	......
12	......	......	......	......	890	1730	222	127	119	......	......	......
13	......	......	......	......	970	1660	200	147	119	......	......	......
14	......	......	......	......	830	1800	182	144	119	......	......	......
15	......	......	......	......	808	1870	163	144	119	......	......	......
16	......	......	......	484	682	1660	147	147	119	......	......	......
17	......	......	......	484	603	1490	144	147	119	......	......	......
18	......	......	......	484	588	1190	144	160	117	......	......	......
19	......	......	......	524	708	1190	144	152	119	......	......	......
20	......	......	......	960	771	1160	176	144	119	......	......	......
21	......	......	......	1470	798	1130	141	144	119	......	......	......
22	......	......	......	1860	861	1060	147	150	119	......	......	......
23	......	......	......	1720	816	1050	163	157	119	......	......	......
24	......	......	......	1430	852	991	163	153	119	......	......	......
25	......	......	......	1350	970	890	157	144	117	......	......	......
26	......	......	......	1280	1080	834	147	141	117	......	......	......
27	......	......	......	1300	1140	735	141	133	117	......	......	......
28	......	......	......	1280	1180	642	139	125	117	......	......	......
29	......	......	......	1300	1360	588	144	122	117	......	......	......
30	......	......	......	1290	1450	658	147	119	119	......	......	......
31	......	......	......	......	1230	......	141	117	......	......	......	......
Total	......	......	......	17216	32967	36119	7922	4434	3602	......	......	......
Mean	......	......	......	1150	1060	1200	256	143	120	......	......	......
Max	......	......	......	......	1530	1870	600	182	133	......	......	......
Min	......	......	......	......	588	588	139	117	114	......	......	......
Acre-ft.	......	......	......	34200	65200	71400	15700	8790	7140	......	......	......

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Laramie River Near Glendevey for 1921

Drainage Area, 101 Square Miles. Altitude, 8,231 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	20	52	610	266	110	53	30	22	....
2	....	....	....	23	78	588	266	104	44	29	21	....
3	....	....	....	31	92	565	233	86	44	28	24	....
4	....	....	....	37	111	588	214	77	40	27	24	....
5	....	....	....	37	124	542	207	70	39	27	24	....
6	....	....	....	29	147	520	189	64	37	29	24	....
7	....	....	....	25	172	805	173	62	36	37	24	....
8	....	....	....	26	145	830	167	60	39	37	21	....
9	....	....	....	26	135	850	167	62	37	34	21	....
10	....	....	....	27	127	880	158	76	34	29	20	....
11	....	....	....	29	125	920	162	65	31	29	21	....
12	....	....	....	31	149	945	160	62	29	29	25	....
13	....	....	....	25	164	895	163	67	27	29	25	....
14	....	....	....	26	162	960	158	78	26	31	24	....
15	....	....	....	19	194	1020	149	91	25	32	25	....
16	....	....	....	23	208	1000	149	65	29	27	....	....
17	....	....	....	16	222	700	144	53	30	23	....	....
18	....	....	....	17	262	700	167	48	30	25	....	....
19	....	....	....	22	246	600	149	47	33	21	....	....
20	....	....	37	26	222	500	128	50	30	19	....	....
21	....	....	33	26	251	450	114	45	25	19	....	....
22	....	....	33	27	279	425	133	45	23	19	....	....
23	....	....	35	47	312	450	189	60	24	18	....	....
24	....	....	30	46	350	400	147	52	28	18	....	....
25	....	....	30	31	359	350	119	49	31	20	....	....
26	....	....	30	27	327	325	104	46	31	22	....	....
27	....	....	27	26	417	300	85	43	30	21	....	....
28	....	....	29	26	508	290	77	39	29	23	....	....
29	....	....	26	26	520	280	71	35	29	24	....	....
30	....	....	23	36	565	275	67	45	29	23	....	....
31	....	....	20	....	655	....	73	49	....	21	....	....
Total	....	....	353	833	7680	18563	4748	1905	972	800	345	....
Mean	....	....	29.4	27.8	248	619	153	61.5	32.4	25.8	23.0	....
Max	....	....	37	47	655	1020	266	110	53	32	25	....
Min	....	....	20	16	52	275	67	35	23	18	20	....
Acre-ft.	....	....	700	1650	15200	36800	9410	3780	1930	1590	684	....

Discharge of Laramie River Near Glendevey for 1922

Drainage Area, 101 Square Miles. Altitude, 8,231 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	9	53	241	127	42	32	....	....	....
2	....	....	....	11	51	244	117	59	28	....	....	....
3	....	....	....	12	55	242	111	48	28	....	....	....
4	....	....	....	16	55	239	108	42	29	....	....	....
5	....	....	....	24	79	229	109	40	27	....	....	....
6	....	....	....	20	103	262	125	37	26	....	....	....
7	....	....	....	18	109	294	114	37	27	....	....	....
8	....	....	....	18	99	330	95	36	27	....	....	....
9	....	....	....	19	96	356	90	36	27	....	....	....
10	....	....	....	16	84	356	92	35	27	....	....	....
11	....	....	....	13	61	321	81	34	26	....	....	....
12	....	....	....	14	62	309	69	34	23	....	....	....
13	....	....	....	11	65	315	72	34	18	....	....	....
14	....	....	....	11	58	336	70	37	17	....	....	....
15	....	....	....	12	53	276	72	33	21	....	....	....
16	....	....	....	10	49	246	73	38	20	....	....	....
17	....	....	....	10	65	244	69	39	21	....	....	....
18	....	....	....	10	109	251	61	38	21	....	....	....
19	....	....	....	10	132	251	52	45	21	....	....	....
20	....	....	....	9	138	239	55	68	21	....	....	....
21	....	....	....	16	145	224	62	50	21	....	....	....
22	....	....	....	30	138	222	59	47	23	....	....	....
23	....	....	....	43	178	212	53	41	21	....	....	....
24	....	....	....	43	232	203	52	39	19	....	....	....
25	....	....	....	41	246	187	46	37	20	....	....	....
26	....	....	....	45	265	168	44	36	20	....	....	....
27	....	....	....	40	297	154	44	33	20	....	....	....
28	....	....	....	43	309	140	50	33	23	....	....	....
29	....	....	....	51	285	138	57	33	27	....	....	....
30	....	....	....	51	249	133	43	34	30	....	....	....
31	....	....	....	....	239	....	41	33	....	....	....	....
Total	....	....	....	676	4159	7362	2313	1228	711	....	....	....
Mean	....	....	....	22.5	134	245	74.6	39.6	23.7	....	....	....
Max	....	....	....	51	309	356	127	68	32	....	....	....
Min	....	....	....	9	49	133	41	33	17	....	....	....
Acre-ft.	....	....	....	1340	8240	14600	4590	2430	1410	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Laramie River Near Jelm, Wyo., for 1921

Drainage Area, 297 Square Miles. Altitude, 7,730 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.
1	......	......	......	......	124	1620	542	163	111	48	......	......
2	......	......	......	......	148	1520	524	199	99	48	......	......
3	......	......	......	......	179	1470	530	173	97	48	......	......
4	......	......	......	......	218	1500	536	154	82	47	......	......
5	......	......	......	......	250	1540	465	131	76	47	......	......
6	......	......	......	......	278	1560	407	108	70	48	......	......
7	......	......	......	......	347	1750	380	102	62	58	......	......
8	......	......	......	......	318	2160	356	97	60	61	......	......
9	......	......	......	......	288	1990	344	95	62	61	......	......
0	......	......	......	......	267	2010	344	118	61	69	......	......
1	......	......	......	......	260	2030	340	121	61	62	......	......
2	......	......	......	......	281	2030	340	99	61	59	......	......
3	......	......	......	......	307	2020	330	202	56	58	......	......
4	......	......	......	......	343	2000	320	170	54	58	......	......
5	......	......	......	......	384	2150	310	242	50	59	......	......
6	......	......	......	......	430	2100	299	154	49	61	......	......
7	......	......	......	......	470	1600	270	116	49	58	......	......
8	......	......	......	......	597	1600	384	97	55	54	......	......
9	......	......	......	......	611	1410	299	93	76	48	......	......
20	......	......	......	......	506	1090	250	102	62	42	......	......
21	......	......	......	......	566	863	225	97	55	35	......	......
22	......	......	......	......	668	792	253	95	50	35	......	......
23	......	......	......	......	780	800	355	108	49	34	......	......
24	......	......	......	......	930	809	245	118	49	34	......	......
25	......	......	......	......	940	818	200	108	54	36	......	......
26	......	......	......	......	820	716	180	97	55	38	......	......
27	......	......	......	......	940	614	155	84	54	40	......	......
28	......	......	......	......	1330	626	145	78	52	42	......	......
29	......	......	......	......	1410	632	140	99	52	44	......	......
30	......	......	......	......	1500	602	131	86	50	44	......	......
31	......	......	......	......	1600	......	131	97	......	44	......	......
Total	......	......	......	......	18090	42422	9730	3803	1873	1520	......	......
Mean	......	......	......	......	584	1410	314	123	62.4	49.0	......	......
Max	......	......	......	......	1600	2160	542	242	111	59	......	......
Min	......	......	......	......	124	602	131	78	49	34	......	......
Acre-ft.	......	......	......	......	35900	83900	19300	7560	3710	3010	......	......

Discharge of Laramie River Near Jelm, Wyo., for 1922

Drainage Area, 297 Square Miles. Altitude, 7,730 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	120	604	226	79	48	......	......	......
2	......	......	......	......	120	566	222	94	48	......	......	......
3	......	......	......	......	120	529	194	102	47	......	......	......
4	......	......	......	......	120	559	167	89	45	......	......	......
5	......	......	......	......	160	559	161	76	44	......	......	......
6	......	......	......	......	196	610	167	71	44	......	......	......
7	......	......	......	......	219	665	216	67	44	......	......	......
8	......	......	......	......	230	780	172	66	43	......	......	......
9	......	......	......	......	258	825	160	64	43	......	......	......
10	......	......	......	......	265	672	145	61	43	......	......	......
11	......	......	......	......	226	700	130	62	43	......	......	......
12	......	......	......	......	187	708	124	64	43	......	......	......
13	......	......	......	......	169	716	113	61	38	......	......	......
14	......	......	......	......	150	658	102	66	35	......	......	......
15	......	......	......	......	140	565	107	72	30	......	......	......
16	......	......	......	......	124	523	90	66	28	......	......	......
17	......	......	......	......	132	500	90	67	29	......	......	......
18	......	......	......	......	169	460	89	72	30	......	......	......
19	......	......	......	......	291	435	85	67	31	......	......	......
20	......	......	......	......	335	405	83	79	34	......	......	......
21	......	......	......	......	391	373	88	81	34	......	......	......
22	......	......	......	96	343	351	92	78	33	......	......	......
23	......	......	......	109	396	339	81	71	30	......	......	......
24	......	......	......	107	478	315	74	64	27	......	......	......
25	......	......	......	107	572	307	72	64	27	......	......	......
26	......	......	......	113	578	275	72	61	27	......	......	......
27	......	......	......	124	658	254	71	58	27	......	......	......
28	......	......	......	122	798	250	72	51	35	......	......	......
29	......	......	......	113	843	244	113	50	47	......	......	......
30	......	......	......	115	910	236	89	53	34	......	......	......
31	......	......	......	......	679	......	78	50	......	......	......	......
Total	......	......	......	1006	10377	14983	3745	2126	1111	......	......	......
Mean	......	......	......	112	335	499	121	68.6	37.0	......	......	......
Max	......	......	......	124	910	825	226	102	48	......	......	......
Min	......	......	......	96	120	236	71	50	27	......	......	......
Acre-ft.	......	......	......	2000	20600	29700	7440	4220	2200	......	......	......

Unless otherwise noted, all discharges are in cubic feet per second.

ARKANSAS RIVER DRAINAGE

H. D. Amsley, Thomas Curtis, Leroy T. Burgess, Hydrographers

TENNESSEE FORK NEAR LEADVILLE

Location—At highway bridge in Sec. 16, T. 9 S., R. 80 W., a few hundred yards above the mouth of the stream and about three miles northwest of Leadville.

Records Available—May 10 to October 31, 1890; June 18 to October 16, 1903; February 8, 1911, to September 30, 1922.

Drainage Area—45 square miles.

Gage—Vertical staff.

Channel—Rough, but practically permanent.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

Co-operation—Station maintained by the United States Geological Survey in co-operation with the United States Forest Service. Records were furnished by the United States Geological Survey.

EAST FORK OF ARKANSAS RIVER NEAR LEADVILLE

Location—At highway bridge in Sec. 16, T. 9 S., R. 80 W., about 200 yards above the mouth of Tennessee Fork, three miles northwest of Leadville.

Records Available—April 25 to August 31, 1890; June 18 to October 11, 1903; June 5, 1911, to September 30, 1922.

Drainage Area—52 square miles.

Gage—Vertical staff.

Channel—Somewhat shifting.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

Accuracy—Results considered fair.

Co-operation—Station maintained by the United States Geological Survey in co-operation with the United States Forest Service. Records were furnished by the United States Geological Survey.

ARKANSAS RIVER AT GRANITE

Location—At Granite, in Sec. 31, T. 11 S., R. 79 W., below the mouth of Lake Creek and above Lost Canyon and Clear Creeks.

Records Available—May 1, 1897, to September 10, 1899; April 6, 1910, to September 30, 1922.

Drainage Area—425 square miles.

Gage—Automatic recording gage established in 1910; datum of recording gage bears no determined relation to that of the vertical staff gage which was used from 1897 to 1899, and which was located at the highway bridge near the railroad station. During 1916, the automatic gage was out of order and estimates are based on readings of the staff gage.

Channel—Practically permanent.

Discharge Measurements—Made from car and cable.

Winter Flow—Ice causes backwater during the winter months and the records are discontinued.

Artificial Control—The discharge is affected by the operation of the Twin Lakes Reservoir.

ARKANSAS RIVER AT SALIDA

Location—At Salida, Colorado, some distance above the mouth of the South Fork of Arkansas River, the nearest tributary of importance.

Records Available—April 11, 1895, to October 31, 1903; November 3, 1909, to September 30, 1922.

Drainage Area—1,160 square miles.

Gage—Automatic recording gage; no determined relation between automatic gage and the gage used from 1895 to 1903.

Channel—Slightly shifting.

Winter Flow—Springs keep the river open during the winter months.

ARKANSAS RIVER AT CANON CITY

Location—Just below Hot Springs Hotel, at the mouth of the canyon, and 1½ miles above Canon City. Nearest important tributary is Grape Creek, which enters above.

Records Available—May 1, 1888, to September 30, 1922.

Drainage Area—3,060 square miles.

Gage—Automatic recording gage established by the State Engineer in September, 1909.

Channel—The channel shifts to such an extent during high water that at times it is necessary to move the gage in order to read the gage heights.

Discharge Measurements—Made from car and cable.

Winter Flow—Ice causes backwater during the winter months.

ARKANSAS RIVER AT PUEBLO

Location—At Main Street Bridge in Pueblo, 2 miles above the mouth of Fountain Creek, the nearest tributary.

Records Available——September 19, 1894, to September 30, 1922. From May 1, 1885, to September 30, 1886, a station was maintained at Pueblo by the State Engineer; from June 1, 1887, to September 30, 1887, a station was maintained at a point 9 miles above Pueblo; from May 1, 1889, to August 31, 1889, the United States Geological Survey maintained the station 9 miles above Pueblo.

Drainage Area—4,600 square miles.

Gage—An automatic gage located 150 feet below Main Street Bridge has been used since March 22, 1911.

Channel—Shifting.

Discharge Measurements—Made from Main Street Bridge.

Winter Flow—Ice causes some slight backwater during the winter months.

ARKANSAS RIVER NEAR NEPESTA

Location—At Oxford Farmers Canal Company's dam in Sec. 31, T. 21 S., R. 60 W., about 6 miles below the mouth of Huerfano River and 1½ miles above Nepesta.

Records Available—September 8, 1897, to October 31, 1903; July 14, 1909, to November 30, 1912; January 1, 1914,—September 30, 1922. From 1918 until June 4, 1921, station maintained at Nepesta.

Gage—Automatic recording and chain gages.

Discharge Measurements—Made at bridge at Nepesta during high water and wading at low stages.

Winter Flow—Ice causes backwater during portion of winter months.

Accuracy—Results poor.

ARKANSAS RIVER AT LA JUNTA

Location—At the east bridge at La Junta; no important tributary within several miles.

Records Available—April 11, 1912, to September 30, 1922. From December 5, 1893, to December 31, 1895, a station was maintained near the city pumping plant. During 1899 and 1901 a station was maintained at the head of the Fort Lyon Canal by the Great Plains Water Co. From April 7, 1903, to October 31, 1903, a station was maintained one mile east of La Junta and a number of dischrge measurements were made during 1904. From August 27, 1908, to November 30, 1908, a station was maintained half a mile northwest of La Junta, just below the mouth of Crooked Arroyo.

Drainage Area—12,200 square miles.

Gage—Automatic recording gage.

Channel—Shifting.

Discharge Measurements—Made from the bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

ARKANSAS RIVER AT LAMAR

Location—Located at highway bridge, one mile north of Lamar.
Records Available—May 11, 1913, to September 30, 1922.
Gage—Bristol automatic gage and standard chain gage.
Channel—Shifting.
Accuracy—Results are considered fair.

ARKANSAS RIVER AT HOLLY

Location—At highway bridge half a mile southeast of Holly, on line between Secs. 14 and 15, T. 23 S., R. 42 W., 1 mile below the mouth of Wild Horse Creek, an intermittent stream.

Records Available—October 15, 1907, to September 30, 1922.

Drainage Area—Approximately 25,000 square miles.

Gage—A number of gages have been used at the station, but all readings have been referred to the same datum except those from October 25 to December 31, 1911, when a different datum was used.

Channel—Very shifting.

Discharge Measurements—Made from bridge during high water and by wading at low stages.

Winter Flow—Ice causes backwater during a portion of the winter months.

COTTONWOOD CREEK BELOW HOT SPRINGS, NEAR BUENA VISTA

Location—In the Leadville National Forest, at bridge in Sec. 22, T. 14 S., R. 79 W., on private bridge 6 miles west of Buena Vista.

Records Available—April 7, 1911, to September 30, 1922. From September 23, 1910, to September 13, 1911, a station was maintained in Section 21, one mile above the present station.

Drainage Area—69 square miles.

Gage—Vertical staff.

Channel—Practically permanent.

Discharge Measurements—Made from bridge or by wading.

Winter Flow—The river is open during the winter months on account of hot springs above.

Diversions—There are court decrees for diversions of 148 second-feet from Cottonwood Creek, of which 28 second feet are above the station.

Accuracy—Records good.

Co-operation—Station maintained by the United States Geological Survey in co-operation with the United States Forest Service. Records furnished by the United States Geological Survey.

SOUTH FORK ARKANSAS RIVER AT MOUTH

Location—In Sec. 5, T. 49 N., R. 9 W., one-half mile above mouth and one-fourth mile east of Salida.

Records Available—April 1—September 30, 1922.

Gage—Staff gage.

Discharge Measurements—Wading at low stages and from bridge during high stages.

FOUNTAIN RIVER AT COLORADO SPRINGS

Location—100 feet below the mouth of Cheyenne Creek ana 150 feet east of where South Nevada Avenue crosses Fountain Creek.

Records Available—March 29 to September 30, 1922.

Gage—Staff gage.

Discharge Measurements—Wading at low stages and from bridge during high stages.

Channel—Shifting.

Accuracy—Poor.

FOUNTAIN RIVER AT PUEBLO

Location—One-half mile above Eighth Street bridge opposite Mineral Palace.

Records Available—April 1—September 30, 1922.

Channel—Shifting.

Gage—Staff gage.

Discharge Measurements—Made by wading at low stages and from Eighth Street bridge at high stages.

ST. CHARLES RIVER AT MOUTH

Location—In Sec. 5, T. 21 S., R. 64 W., on temporary bridge where Santa Fe Trail crosses river.

Records Available—April 1—September 30, 1922.

Channel—Shifting.

Gage—Staff and automatic gages.

Discharge Measurements—Wading at low stages and from highway bridge at high stages.

APISHAPA RIVER AT MOUTH

Location—In Sec. 24, T. 22 S., R. 59 W., near where Santa Fe Trail crosses the river.

Records Available—April 30—September 30, 1922.

Channel—Shifting.

Gage—Staff and automatic gages.

Discharge Measurements—Wading at low stages and from highway bridge at high stages.

TIMPAS CREEK AT MOUTH

Location—In Sec. 26, T. 23 S., R. 56 W., about 1,200 feet downstream from where Santa Fe Trail crosses the creek.

Records Available—April 1—September 30, 1922.

Gage—Staff and automatic gages.

Discharge Measurements—Wading at low stages and from highway bridge at high stages.

CROOKED ARROYA AT MOUTH

Location—In Sec. 5, T. 24 S., R. 55 W., about 300 feet upstream from where Santa Fe Trail crosses the creek.

Records Available—April 1—September 30, 1922.

Gage—Staff and automatic gages.

Discharge Measurements—Wading at low stages and from highway bridge at high stages.

PURGATOIRE RIVER AT TRINIDAD

Location—150 feet below west Main Street bridge in Trinidad.

Records Available—April 1, 1916, to September 30, 1922. From 1897 to 1899 and 1905 to 1912, a station was maintained a little below this station. From 1916 to 1921 the station was maintained at Commercial Street bridge.

Drainage Area—742 square miles.

Channel—Shifting.

Gage—Staff and automatic gages.

Discharge Measurements—Made by wading at low stages and from Animas Street bridge during high stages.

Accuracy—Results can not be considered better than fair.

PURGATOIRE RIVER AT MOUTH

Location—In Sec. 12, T. 23 S., R. 52 W., where the Santa Fe Railroad crosses the river.

Records Available—April 1—September 30, 1922.

Gage—Staff and automatic gages.

Discharge Measurements—Wading at low stages and from highway bridge, one-half mile upstream, during high stages.

Discharge of Tennessee Fork Near Leadville for 1921

Drainage Area, 45 Square Miles. Altitude, 10,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	30	252	107	44	42	8	9	....
2	....	....	....	17	40	240	86	45	42	6	9	....
3	....	....	....	....	60	240	107	44	47	6	10	....
4	....	....	10	....	80	286	112	36	40	6	9	....
5	....	....	....	....	100	252	95	36	30	7	9	....
6	....	....	....	....	145	252	68	29	47	6	10	....
7	....	....	....	....	140	240	74	29	36	6	9	....
8	....	....	....	....	135	229	76	23	34	7	9	....
9	....	....	....	17	120	252	64	22	22	6	11	....
10	....	....	....	....	139	252	64	23	23	6	10	....
11	....	....	....	....	130	264	86	29	32	5	10	....
12	....	....	....	....	99	310	74	24	29	5	10	....
13	....	....	....	....	141	298	82	23	29	5	10	....
14	....	....	....	....	110	358	101	24	16	4	10	....
15	....	....	....	....	141	324	64	32	12	4	10	....
16	....	....	....	....	126	200	66	26	13	4	10	....
17	....	....	....	....	126	178	72	21	14	5	10	....
18	....	....	....	22	141	181	58	29	18	4	10	....
19	....	....	....	....	126	203	68	19	14	7	11	....
20	....	....	....	....	99	167	58	21	13	9	10	....
21	....	....	....	....	135	130	47	29	12	10	10	....
22	....	....	....	....	139	124	66	45	13	9	10	....
23	....	....	....	....	141	124	80	45	11	10	10	....
24	....	....	....	....	126	128	64	32	11	9	10	....
25	....	....	....	....	152	124	49	32	14	10	10	....
26	....	....	16	....	135	118	49	29	15	10	10	....
27	8	....	....	....	150	118	42	24	14	10	10	....
28	....	....	....	....	174	118	42	49	12	9	10	....
29	....	....	....	21	218	118	37	39	13	8	10	....
30	....	....	....	....	229	116	33	39	11	10	10	....
31	....	....	....	....	240	....	32	37	....	9	....	....
Total	248	224	372	570	4067	6196	2123	979	679	220	296	....
Mean	8	8	12	19	131	207	68.5	31.6	22.6	7.1	9.9	9
Max	....	....	....	....	240	358	112	49	47	10	11	....
Min	....	....	....	....	30	116	32	19	11	4	9	....
Acre-ft.	492	444	738	1130	8060	12300	4210	1940	1340	437	589	553

Discharge of Tennessee Fork Near Leadville for 1922.

Drainage Area, 45 Square Miles. Altitude, 10,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	159	241	65	36	17	....	....	....
2	....	....	....	....	144	224	54	52	17	....	....	....
3	....	....	....	....	162	204	52	52	14	....	....	....
4	....	....	....	....	165	172	49	29	20	....	....	....
5	....	....	....	....	150	153	42	24	17	....	....	....
6	....	....	....	....	169	141	35	29	14	....	....	....
7	....	....	....	....	188	150	28	29	12	....	....	....
8	....	....	....	....	172	159	27	19	11	....	....	....
9	....	....	....	....	159	169	70	11	17	....	....	....
10	....	....	....	....	132	162	103	11	17	....	....	....
11	....	....	....	....	101	129	52	22	16	....	....	....
12	....	....	....	....	94	132	52	18	11	....	....	....
13	....	....	....	....	85	132	56	17	10	....	....	....
14	....	....	....	....	82	132	32	23	7	....	....	....
15	....	....	....	....	87	129	24	20	5	....	....	....
16	....	....	....	....	80	101	28	30	5	....	....	....
17	....	....	11	....	110	89	19	42	6	....	....	....
18	....	....	....	....	129	92	19	32	5	....	....	....
19	....	....	....	....	106	101	19	27	5	....	....	....
20	....	....	....	....	138	80	12	30	4	....	....	....
21	....	....	....	....	147	87	12	35	4	....	....	....
22	....	....	....	....	138	96	12	29	4	....	....	....
23	....	....	....	....	129	89	13	26	3	....	....	....
24	....	....	....	....	175	94	11	49	3	....	....	....
25	....	....	....	....	188	78	13	28	3	....	....	....
26	10	....	....	....	238	76	10	17	2	....	....	....
27	....	....	....	....	268	78	11	13	2	....	....	....
28	....	....	....	....	251	56	19	17	2	....	....	....
29	....	....	....	....	265	63	29	20	2	....	....	....
30	....	....	....	111	279	59	29	17	2	....	....	....
31	....	....	....	....	244	....	36	14	....	....	....	....
Total	....	....	....	....	4934	3668	1033	818	257	....	....	....
Mean	9	9	10	18	159	122	33.3	26.4	8.6	....	....	....
Max	....	....	....	111	279	241	103	52	20	....	....	....
Min	....	....	....	....	80	56	10	11	2	....	....	....
Acre-ft.	553	500	615	1170	9780	7260	2050	1620	512	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of East Fork Arkansas River Near Leadville for 1921

Drainage Area, 52 Square Miles. Altitude, 10,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	12	220	112	60	71	16	16	....
2	....	....	....	....	15	200	121	57	68	16	16	....
3	....	....	....	....	20	200	118	48	66	13	16	....
4	....	....	8	....	25	230	121	44	57	12	18	....
5	....	....	....	....	50	220	115	40	51	13	18	....
6	....	....	....	....	55	220	98	35	51	12	....	....
7	....	....	....	....	42	200	92	30	46	13	....	....
8	....	....	....	....	39	190	98	31	51	13	....	....
9	....	....	....	....	25	220	82	31	46	13	....	....
10	....	....	....	....	20	220	82	30	28	12	....	....
11	....	....	....	....	20	300	90	31	44	12	....	....
12	....	....	....	....	20	400	64	30	31	12	....	....
13	....	....	....	....	35	500	80	31	30	12	....	....
14	....	....	....	....	57	661	121	35	20	12	....	....
15	....	....	....	....	75	773	85	37	21	10	....	....
16	....	....	....	....	80	556	85	60	20	9	....	....
17	....	....	....	....	95	514	82	31	20	9	....	....
18	....	....	....	....	95	480	82	42	30	9	....	....
19	....	....	....	....	80	409	78	30	30	12	....	....
20	....	....	....	....	80	316	80	28	22	13	....	....
21	....	....	....	....	75	178	71	37	25	16	....	....
22	....	....	....	....	115	195	82	34	23	16	....	....
23	....	....	....	....	115	212	78	66	19	16	....	....
24	....	....	....	....	106	148	73	37	20	16	....	....
25	....	....	....	....	115	207	73	34	27	16	....	....
26	....	....	....	....	148	166	66	37	23	16	....	....
27	9	....	....	....	148	148	60	30	20	16	....	....
28	....	....	....	....	148	166	53	75	20	16	....	....
29	....	....	....	8	186	148	46	51	18	15	....	....
30	....	....	....	....	190	152	48	53	16	16	....	....
31	....	....	....	....	200	....	44	53	....	16	....	....
Total	....	....	....	....	2486	8749	2580	1268	1014	418	450	....
Mean	....	....	....	....	80.2	292	83.2	40.9	33.8	13.5	15	....
Max	....	....	....	....	200	773	121	75	71	16	....	....
Min	....	....	....	....	12	148	44	28	16	9	....	....
Acre-ft.	....	....	....	....	4930	17400	5120	2510	2010	830	893	....

Discharge of East Fork Arkansas River Near Leadville for 1922.

Drainage Area, 52 Square Miles. Altitude, 10,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	19	352	88	53	30	....	....	....
2	....	....	....	....	20	255	73	100	37	....	....	....
3	....	....	....	....	23	266	82	53	32	....	....	....
4	....	....	....	....	27	255	82	44	23	....	....	....
5	....	....	....	....	35	272	66	35	34	....	....	....
6	....	....	....	....	51	282	57	28	28	....	....	....
7	....	....	....	....	64	299	49	44	30	....	....	....
8	....	....	....	....	75	310	55	35	28	....	....	....
9	....	....	....	....	66	328	75	22	23	....	....	....
10	....	....	....	....	51	310	80	22	25	....	....	....
11	....	....	....	....	44	255	57	22	22	....	....	....
12	....	....	....	....	35	260	48	32	21	....	....	....
13	....	....	....	....	32	191	40	21	21	....	....	....
14	....	....	....	....	26	174	31	27	20	....	....	....
15	....	....	....	....	28	166	30	37	13	....	....	....
16	....	....	....	....	25	118	34	62	15	....	....	....
17	....	....	9	....	46	109	37	82	13	....	....	....
18	....	....	....	....	68	134	30	31	9	....	....	....
19	....	....	....	....	68	109	23	31	15	....	....	....
20	....	....	....	....	75	134	37	37	10	....	....	....
21	....	....	....	....	57	115	22	31	9	....	....	....
22	....	....	....	....	60	124	26	32	9	....	....	....
23	....	....	....	....	68	121	23	37	11	....	....	....
24	....	....	....	....	75	124	26	112	9	....	....	....
25	....	....	....	....	95	100	22	49	11	....	....	....
26	....	....	....	....	88	98	23	26	12	....	....	....
27	....	....	....	....	92	98	22	26	9	....	....	....
28	....	....	....	....	402	80	28	23	9	....	....	....
29	....	....	....	....	364	95	64	31	9	....	....	....
30	....	....	....	16	402	103	46	31	10	....	....	....
31	....	....	....	....	370	....	53	27	....	....	....	....
Total	....	....	....	....	2951	5637	1429	1243	547	....	....	....
Mean	....	....	....	....	95.2	188	46.1	40.1	18.2	....	....	....
Max	....	....	....	....	402	352	88	100	37	....	....	....
Min	....	....	....	....	19	80	22	22	9	....	....	....
Acre-ft.	....	....	....	....	5850	11200	2830	2470	1080	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Granite for 1921

Drainage Area, 425 Square Miles. Altitude, 8,930 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	78	212	1190	1310	554	592	149	144	149
2	....	....	....	78	354	1190	1250	554	511	152	160	144
3	....	....	....	78	438	1160	1110	506	469	141	163	141
4	....	....	....	78	544	866	980	425	447	136	163	136
5	....	....	....	78	564	894	866	395	425	136	155	139
6	....	....	....	78	627	922	783	358	366	136	155	158
7	....	....	....	78	627	866	730	334	323	149	149	141
8	....	....	....	78	460	756	627	334	312	158	152	147
9	....	....	....	85	395	980	602	327	298	136	134	147
10	....	....	....	102	245	1130	554	316	298	136	139	141
11	....	68	....	124	235	1190	530	334	309	136	144	147
12	....	....	....	141	255	1130	554	334	279	129	139	155
13	....	....	....	108	255	1220	627	342	262	119	147	155
14	....	....	....	124	334	1250	756	366	245	114	147	163
15	....	....	....	85	506	1130	894	366	242	117	141	158
16	....	....	....	104	460	1070	894	374	221	129	136	158
17	....	....	....	108	483	1100	894	354	212	141	122	158
18	....	....	....	117	530	1070	866	327	228	195	110	173
19	....	....	....	136	544	951	866	334	238	262	124	163
20	....	....	....	141	374	894	866	354	212	262	136	158
21	....	....	....	124	316	838	783	395	182	238	149	139
22	....	....	....	136	354	838	627	395	173	228	139	144
23	....	....	....	158	438	866	678	492	179	228	136	144
24	....	....	....	163	578	894	783	460	169	228	129	144
25	....	....	....	124	612	894	602	425	173	238	134	144
26	....	....	....	112	704	1030	602	395	169	245	139	144
27	....	....	....	112	704	1160	578	408	163	245	141	136
28	....	....	....	117	866	1100	506	554	155	231	141	134
29	....	....	....	141	951	1100	506	429	141	136	144	134
30	....	....	....	163	1070	1190	530	395	139	136	149	139
31	....	....	....	....	1160	....	554	451	....	136	....	136
Total	....	....	....	3349	16195	30869	23308	12387	8132	5322	4261	4569
Mean	....	....	....	112	522	1030	752	400	271	172	142	147
Max	....	....	....	163	1160	1250	1310	554	592	262	163	173
Min.	....	....	....	78	212	756	506	316	139	114	110	134
Acre-ft.	....	....	....	6660	32100	61300	46200	24600	16100	10600	8450	9040

Discharge of Arkansas River at Granite for 1922.

Drainage Area, 425 Square Miles. Altitude, 8,930 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	113	90	84	106	426	751	952	517	779	....	....	....
2	116	98	84	106	421	897	921	533	684	....	....	....
3	100	110	84	131	435	1020	874	431	627	....	....	....
4	76	110	84	148	450	1140	874	371	389	....	....	....
5	76	78	106	148	465	1210	890	528	232	....	....	....
6	75	84	84	148	539	1290	952	697	219	....	....	....
7	87	89	84	124	596	1380	914	697	225	....	....	....
8	87	110	84	124	614	1490	800	677	209	....	....	....
9	87	110	84	124	744	1580	807	671	203	....	....	....
10	84	105	84	124	837	1530	929	664	200	....	....	....
11	72	105	84	124	723	1450	852	717	180	....	....	....
12	86	78	106	124	620	1460	786	730	171	....	....	....
13	75	81	106	102	596	1540	765	270	171	....	....	....
14	98	73	106	102	556	1530	800	308	171	....	....	....
15	69	98	131	124	517	1470	852	297	156	....	....	....
16	85	92	131	124	495	1440	830	304	146	....	....	....
17	100	89	131	124	480	1210	751	353	138	....	....	....
18	88	110	106	124	506	1260	677	293	146	....	....	....
19	88	98	106	124	639	1280	677	252	141	....	....	....
20	77	94	106	124	807	1330	684	235	134	....	....	....
21	72	106	106	148	897	1420	639	222	124	....	....	....
22	82	106	156	148	905	1290	384	281	124	....	....	....
23	88	84	156	148	983	1130	337	289	131	....	....	....
24	88	84	156	174	1060	1100	324	324	171	....	....	....
25	86	84	131	174	1160	991	324	677	209	....	....	....
26	100	106	131	235	1280	944	329	874	206	....	....	....
27	107	84	131	206	1330	882	333	807	203	....	....	....
28	115	84	131	242	1260	867	367	793	203	....	....	....
29	90	....	106	293	1230	867	440	786	166	....	....	....
30	104	....	106	384	1250	952	398	793	129	....	....	....
31	93	....	106	....	1110	....	412	800	....	....	....	....
Total	2764	2640	3391	4631	23931	36701	20874	16191	6987	....	....	....
Mean	89	94.3	109	154	772	1220	673	522	233	....	....	....
Max	....	....	156	384	1330	1580	952	874	779	....	....	....
Min.	....	....	84	102	421	751	324	222	124	....	....	....
Acre-ft.	5470	5240	6700	9160	47500	72600	41400	32100	13900	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Salida for 1921

Drainage Area, 1,160 Square Miles. Altitude, 7,038 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	248	234	292	234	338	2680	2690	1020	1020	350	501	378
2........	248	210	292	234	487	2620	2600	976	958	374	416	378
3........	248	210	309	234	534	2730	2340	928	928	362	420	378
4........	256	234	327	234	716	2460	2050	846	841	342	442	358
5........	267	234	327	248	869	2360	1910	759	797	342	442	358
6........	267	234	327	248	1060	2260	1560	716	711	346	442	350
7........	267	221	309	234	1240	2360	1390	689	631	354	442	346
8........	262	190	276	221	1000	1750	1170	600	605	346	442	338
9........	234	190	262	221	781	2110	1100	568	579	320	420	338
10........	229	200	256	234	600	2680	1100	534	563	302	399	358
11........	239	234	256	234	510	3170	1200	574	553	309	420	378
12........	234	248	262	234	548	3640	1200	584	520	309	420	370
13........	221	234	276	248	652	3220	2340	574	478	309	420	350
14........	221	234	276	262	662	3410	1910	574	460	309	420	346
15........	234	234	248	292	1030	3760	2000	600	460	309	399	346
16........	262	239	234	292	1240	3580	2100	589	464	313	399	346
17........	276	210	234	262	1270	3340	2050	589	464	362	412	302
18........	276	210	248	276	1240	3150	1980	568	464	412	399	338
19........	276	214	262	292	910	2600	2050	558	497	534	370	358
20........	267	229	262	309	770	2310	1940	639	442	558	399	358
21........	256	234	248	327	584	2090	1700	705	420	524	416	358
22........	256	234	234	309	584	2000	1560	738	412	515	399	350
23........	262	239	234	292	636	1860	1560	738	399	492	399	358
24........	256	239	234	309	824	2260	1910	786	407	515	399	338
25........	229	239	234	327	1010	2230	1600	846	386	524	399	338
26........	210	256	234	309	1160	2240	1480	840	382	524	378	366
27........	221	262	234	292	1200	2710	1360	852	382	534	378	358
28........	234	286	234	292	1560	2560	1290	1000	362	553	370	358
29........	239	....	234	286	1880	2490	1150	958	342	529	358	338
30........	229	....	234	302	2430	2430	988	813	342	492	370	346
31........	221	....	234	....	2560	....	988	824	....	501	....	358
Total	7645	6432	8123	8088	30885	79060	52266	22585	16269	12865	12290	10938
Mean..	247	230	262	270	996	2640	1690	729	542	415	410	353
Max....	276	286	327	327	2560	3760	2690	1020	1020	558	501	378
Min.....	210	190	234	221	338	1750	988	534	342	302	358	302
Acre-ft.	15200	12800	16100	16100	61200	157000	104000	44800	32300	25500	24400	21700

Discharge of Arkansas River at Salida for 1922.

Drainage Area, 1,160 Square Miles. Altitude, 7,038 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	301	263	233	222	492	1550	2050	822	955	....	....	....
2........	307	260	230	227	519	1710	2030	1010	927	....	....	....
3........	311	263	263	249	534	1790	1980	913	850	....	....	....
4........	295	274	283	283	640	2040	1940	796	732	....	....	....
5........	271	274	254	295	640	2150	1940	708	457	....	....	....
6........	271	243	246	274	738	2290	1960	1040	393	....	....	....
7........	265	249	225	298	892	2380	1970	970	382	....	....	....
8........	277	254	265	298	1010	2540	1850	913	382	....	....	....
9........	277	277	243	295	1060	2630	1770	871	382	....	....	....
10........	277	274	246	292	1250	2560	1900	843	364	....	....	....
11........	274	271	254	274	1150	2500	1860	809	353	....	....	....
12	257	271	251	289	1070	2510	1770	920	340	....	....	....
13........	271	243	246	277	1000	2550	1650	557	333	....	....	....
14........	260	246	251	268	948	2660	1660	424	340	....	....	....
15........	283	238	265	268	850	2490	1610	515	343	....	....	....
16........	254	263	271	277	763	2350	1630	470	347	....	....	....
17........	265	257	271	265	738	2130	1570	640	343	....	....	....
18........	280	254	274	240	829	2170	1530	696	343	....	....	....
19........	268	274	257	263	913	2170	1520	770	350	....	....	....
20........	268	263	235	280	1260	2200	1460	738	347	....	....	....
21	257	263	240	292	1470	2270	1390	645	347	....	....	....
22........	257	268	240	304	1510	2270	1360	608	343	....	....	....
23........	257	251	254	314	1640	2170	543	562	336	....	....	....
24........	263	249	271	333	1630	2150	528	533	323	....	....	....
25........	263	249	254	340	1830	2120	496	553	367	....	....	....
26........	271	254	240	360	2040	2080	501	1090	382	....	....	....
27........	271	257	240	371	2250	2030	519	1040	382	....	....	....
28........	277	251	225	397	2320	2010	528	970	382	....	....	....
29........	286	....	217	428	2270	1970	668	941	379	....	....	....
30........	260	....	217	440	2300	2060	720	978	333	....	....	....
31........	274	....	220	....	2190	....	696	1000	....	....	....	....
Total	8468	7253	7681	9013	38746	66500	43599	24345	12837	....	....	....
Mean..	273	259	248	300	1250	2220	1410	785	428	....	....	....
Max....	311	277	283	440	2320	2660	2050	1090	955	....	....	....
Min.....	254	238	217	222	492	1550	496	424	323	....	....	....
Acre-ft.	16800	14400	15200	17900	76900	132000	86700	48300	25500	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Canon City for 1921.

Drainage Area, 3,060 Square Miles. Altitude, 5,363 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	450	345	379	252	331	3130	2850	1500	973	416	520	448
2........	364	317	379	262	331	3060	2850	4100	1190	448	501	432
3........	415	308	394	268	449	3130	2710	2000	1090	432	458	458
4........	460	317	449	288	573	3430	2430	1190	1090	406	458	406
5........	449	345	449	288	751	3500	2020	1170	1000	406	458	406
6........	415	331	404	242	927	3500	1970	955	982	406	458	458
7........	404	317	379	236	1130	3500	1730	982	892	398	448	448
8........	379	308	354	231	1170	3130	1560	982	822	406	416	416
9........	331	300	317	236	927	2850	1340	822	740	398	406	442
10........	345	331	300	223	789	3280	1240	588	662	366	406	416
11........	364	364	308	210	586	3730	1340	625	740	398	416	432
12........	354	317	308	231	533	4420	1340	2100	625	406	432	432
13........	345	308	308	236	533	4580	1290	1210	588	386	448	432
14........	345	308	317	236	692	4340	1790	781	520	386	416	432
15........	415	317	288	304	781	4900	2500	822	520	398	458	406
16........	449	288	276	308	927	4980	2290	610	534	374	432	416
17........	460	288	268	359	970	4500	2810	554	489	374	448	386
18........	449	317	288	415	988	4020	2500	603	554	508	508	394
19........	415	331	276	508	1010	3800	2790	588	520	489	448	448
20........	354	308	308	812	844	3200	2500	625	527	625	470	432
21........	331	317	308	621	692	2850	2290	740	489	588	534	458
22........	308	331	276	490	628	2570	2850	765	477	588	520	458
23........	331	308	268	404	714	2500	2640	1190	453	588	520	458
24........	354	354	268	404	789	2640	2290	1090	489	574	554	406
25........	317	354	252	404	1130	2500	2500	1000	470	588	520	432
26........	331	354	268	354	1190	2360	2570	982	448	588	534	442
27........	354	345	276	331	1290	2850	1890	910	448	588	458	458
28........	394	364	268	308	1580	2710	1770	1050	432	588	458	458
29........	345	....	276	308	2010	2640	1620	1270	432	588	448	432
30........	331	....	276	308	2780	2570	1400	1000	406	534	470	432
31........	308	....	268	....	2990	....	1240	955	....	520	....	416
Total	11666	9092	9753	10077	31035	101170	64910	33669	19602	14758	14021	13390
Mean .	376	325	315	336	1000	3370	2090	1090	653	476	467	432
Max....	460	364	449	812	2990	4980	2850	4100	1190	625	554	458
Min.....	308	288	252	210	331	2360	1240	554	406	366	406	386
Acre-ft.	23100	18100	19400	20000	61500	201000	129000	67000	38900	29300	27800	26600

Discharge of Arkansas River at Canon City for 1922.

Drainage Area, 3,060 Square Miles. Altitude, 5,363 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	472	333	253	269	519	2250	1870	811	1020	....	....	....
2........	472	342	319	296	561	1540	1850	956	974	....	....	....
3........	472	309	395	307	561	1760	1820	920	938	....	....	....
4........	347	344	427	319	604	2010	1690	827	869	....	....	....
5........	291	406	407	330	686	2160	1680	869	678	....	....	....
6........	291	429	335	341	747	2380	1690	1020	477	....	....	....
7........	291	437	319	330	852	2550	1750	1120	452	....	....	....
8........	314	378	324	330	974	2690	1640	992	414	....	....	....
9........	337	428	341	291	1020	2880	1480	956	401	....	....	....
10........	315	450	324	291	1140	2900	1510	903	371	....	....	....
11........	357	359	341	274	1180	2790	1660	869	341	....	....	....
12........	294	319	335	296	1070	2700	1470	912	313	....	....	....
13........	317	298	335	330	956	2740	1310	938	296	....	....	....
14........	324	300	335	324	920	2940	1250	568	296	....	....	....
15........	337	315	359	307	835	2740	1250	604	383	....	....	....
16........	332	372	383	353	819	2560	1240	568	519	....	....	....
17........	357	374	401	377	787	2460	1270	634	341	....	....	....
18........	352	302	420	371	787	2240	1140	787	324	....	....	....
19........	329	377	377	365	803	2310	1110	920	313	....	....	....
20........	427	377	359	395	1090	2250	1020	852	330	....	....	....
21........	402	365	365	377	1250	2180	1000	827	341	....	....	....
22........	345	347	395	389	1420	2340	894	732	335	....	....	....
23........	392	335	433	407	1500	2190	626	663	324	....	....	....
24........	421	330	472	452	1600	2070	634	611	324	....	....	....
25........	436	347	459	485	1750	2050	533	590	319	....	....	....
26........	411	319	407	517	1990	1960	477	920	383	....	....	....
27........	406	319	341	540	2210	1900	499	1060	401	....	....	....
28........	414	313	330	492	2450	1810	485	992	407	....	....	....
29........	310	....	274	446	2480	1740	619	992	389	....	....	....
30........	391	....	269	477	2480	1810	1050	1010	371	....	....	....
31........	420	....	258	....	2450	....	920	1040	....	....	....	....
Total	11376	9924	11092	11078	38491	68900	37437	26463	13644	....	....	....
Mean..	367	354	358	369	1240	2300	1210	854	455	....	....	....
Max....	472	450	472	540	2480	2940	1870	1120	1020	....	....	....
Min.....	291	298	253	269	519	1540	477	568	296	....	....	....
Acre-ft.	22600	19700	22000	22000	76200	137000	74400	52500	27100	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Pueblo for 1921.

Drainage Area, 4,600 Square Miles. Altitude, 4,675 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	400	269	170	178	388	2380	2860	1820	1200	299	442	551
2	313	228	189	129	415	5300	3070	2690	1030	304	519	532
3	378	256	163	142	471	20700	2840	4800	857	308	519	532
4	431	228	189	135	532	34600	2900	1270	726	336	552	488
5	399	240	313	152	734	19200	3050	1080	750	277	532	471
6	399	248	327	129	926	10800	2590	978	680	248	551	500
7	415	282	290	129	1110	6650	2660	960	613	248	513	513
8	399	282	290	129	1330	5480	2320	1040	571	290	500	513
9	362	240	282	142	1080	5080	1980	934	532	282	442	506
10	346	256	200	142	734	5140	2050	782	483	261	471	500
11	362	290	103	142	564	5950	2030	1020	513	313	442	519
12	336	269	109	163	471	5840	2100	1860	519	313	431	519
13	346	240	103	170	442	6470	2090	1710	477	346	442	500
14	327	208	109	208	500	5910	2540	2320	415	352	471	532
15	362	216	208	290	702	6350	3830	2110	448	336	500	513
16	378	200	193	336	883	5950	3100	1200	426	336	500	500
17	362	178	189	313	1070	5480	3510	943	431	336	471	532
18	378	178	178	378	1150	5280	3660	824	465	336	538	471
19	415	189	170	488	1150	4400	6240	766	442	420	506	578
20	415	178	163	388	874	3760	2760	710	420	483	500	649
21	299	178	216	774	750	3600	2740	782	383	564	613	649
22	327	208	200	672	599	3260	3130	849	431	578	649	649
23	290	208	189	599	620	2940	3980	1160	410	578	634	672
24	327	170	152	726	695	2940	2320	1120	362	585	620	672
25	313	200	129	634	1050	3020	3230	960	431	599	620	578
26	290	152	152	672	1250	2940	2350	969	346	620	634	564
27	290	163	170	500	1370	2720	3260	926	352	649	578	634
28	313	189	189	442	1400	2870	2290	908	308	599	532	657
29	346	....	152	415	1670	2520	1940	1020	313	564	532	672
30	269	....	152	388	1880	2640	1530	900	318	471	532	657
31	240	....	163	....	2190	....	1430	1430	....	471	....	649
Total	10827	6143	5800	10105	29000	200170	86380	40841	15652	12702	15785	17472
Mean	349	219	187	337	935	6670	2790	1320	522	410	526	564
Max	431	290	327	774	2190	34600	6240	4800	1200	649	649	672
Min	240	152	103	129	388	2380	1430	710	308	248	431	471
Acre-ft.	21500	12200	11500	20100	57500	397000	172000	81200	31100	25200	31300	34700

Discharge of Arkansas River at Pueblo for 1922.

Drainage Area, 4,600 Square Miles. Altitude, 4,675 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	600	442	354	268	265	2120	1890	717	781	....	....	....
2	515	375	335	256	446	1270	2470	736	787	....	....	....
3	483	386	481	233	507	1390	1820	900	893	....	....	....
4	483	375	452	256	522	1490	1720	822	871	....	....	....
5	407	402	390	262	547	1780	1600	781	761	....	....	....
6	396	386	311	271	629	2030	1530	1170	411	....	....	....
7	480	350	287	256	717	2270	1520	1010	336	....	....	....
8	422	402	253	242	828	2410	1480	978	291	....	....	....
9	446	316	287	242	923	2650	1360	1070	265	....	....	....
10	480	463	284	231	1070	2710	1310	856	248	....	....	....
11	478	445	304	218	1150	2560	1500	815	265	....	....	....
12	475	415	304	151	1080	2460	1460	842	274	....	....	....
13	470	415	291	129	629	2310	1350	878	220	....	....	....
14	465	445	297	239	842	2440	1330	669	215	....	....	....
15	460	370	291	236	835	2540	1220	497	220	....	....	....
16	460	354	314	265	736	2490	1320	522	568	....	....	....
17	455	360	332	271	693	2310	1160	455	336	....	....	....
18	450	370	328	284	693	1990	1110	522	281	....	....	....
19	445	364	328	300	863	2030	1030	781	262	....	....	....
20	440	360	300	284	930	1820	1050	652	256	....	....	....
21	430	386	242	265	1070	1790	946	675	253	....	....	....
22	400	380	218	297	1220	1910	938	634	242	....	....	....
23	400	375	181	294	1320	1880	669	579	223	....	....	....
24	430	370	201	253	1460	1710	507	532	194	....	....	....
25	480	365	256	262	1530	1630	512	474	187	....	....	....
26	490	375	287	294	1660	1500	366	411	196	....	....	....
27	408	391	297	284	2500	1430	356	705	233	....	....	....
28	413	350	294	223	2540	1510	356	749	248	....	....	....
29	415	....	265	201	2440	1370	532	856	226	....	....	....
30	414	....	262	223	2490	1490	606	962	205	....	....	....
31	335	....	256	....	2340	....	705	822	....	....	....	....
Total	13925	10787	9282	7490	35475	59290	35723	23072	10748	....	....	....
Mean	449	385	299	250	1140	1980	1150	744	358	....	....	....
Max	....	....	481	300	2540	2710	2470	1170	893	....	....	....
Min	....	....	181	129	265	1270	356	411	187	....	....	....
Acre-ft.	27600	21400	18400	14900	70100	118000	70700	45700	21300	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Nepesta for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	200	240	54	162	370	2020						
2	200	252	57	67	444							
3	160	260	69	42	458							
4	125	240	208	59	430							
5	230	228	244	50	376							
6	190	252	328	118	516							
7	190	260	310	123	643							
8	215	260	300	141	677							
9	192	270	265	147	804							
10	165	300	236	165	652							
11	188	370	100	135	465							
12	358	370	43	135	364							
13	346	370	98	165	430							
14	350	322	120	162	661							
15	330	322	115	236	815							
16	360	310	177	305	782							
17	458	300	159	270	697							
18	300	310	159	305	679							
19	370	340	168	382	715							
20	382	370	159	465	760							
21	260	352	165	598	556							
22	228	316	192	556	516							
23	180	310	171	556	625							
24	188	285	150	486	697							
25	165	270	168	598	771							
26	95	204	208	524	1030							
27	35	55	208	493	1120							
28	49	48	244	472	1180							
29	300		232	430	1540							
30	322		240	437	1080							
31	260		168		1540							
Total	7391	7786	5515	8784	22413							
Mean	238	278	178	293	723							
Max	458	370	328	598	1540							
Min	35	48	43	42	364							
Acre-ft.	14600	15400	10900	17400	44500							

Discharge of Arkansas River Near Nepesta for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			190	165	243	1800	1250	994	185			
2			185	160	352	1070	1930	205	180			
3			210	160	453	873	1370	272	210			
4			185	156	429	1100	1410	1160	278			
5			170	175	437	1150	1320	254	265			
6			165	205	521	1040	1210	878	278			
7			160	221	625	1210	1230	1560	330			
8			140	185	697	1340	1050	1210	248			
9			205	180	675	1350	924	195	227			
10			272	232	539	1720	798	879	238			
11			265	96	548	1560	835	461	238			
12			265	140	530	1490	1050	216	216			
13			260	48	360	1370	885	190	190			
14			248	58	310	1280	872	453	160			
15			221	136	421	1320	675	48	185			
16			227	200	375	1280	675	248	429			
17			232	284	330	1890	785	485	368			
18			238	260	284	1370	848	461	248			
19			352	210	304	1280	719	797	227			
20			557	200	324	1350	605	774	195			
21			248	185	461	1320	360	752	216			
22			72	221	605	1350	375	741	265			
23			46	346	566	1450	382	635	243			
24			42	298	548	1370	185	539	144			
25			120	304	625	1210	730	469	160			
26			200	615	730	1350	625	382	152			
27			304	774	1740	1230	413	205	148			
28			265	445	2490	1050	548	190	111			
29			278	323	1960	1430	557	170	111			
30			205	272	1980	1100	1180	390	76			
31			136		2130		898	265				
Total			6663	7254	22592	39703	26694	16477	6521			
Mean			215	242	729	1320	861	532	217			
Max			557	774	2490	1890	1930	1560	429			
Min			42	48	242	873	185	48	76			
Acre-ft.			13200	14400	44800	78600	52900	32700	12900			

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at La Junta for 1921

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12	15	9	72	280	396	1840	732	777	175	72	155
2	13	10	14	35	280	678	1730	3160	189	198	54	118
3	14	18	24	40	224	959	1910	10800	194	167	72	89
4	16	13	15	76	100	61100	2100	5470	198	189	163	324
5	14	13	21	128	228	46500	2620	1600	180	249	94	114
6	14	10	17	128	196	25000	2000	1450	163	175	72	68
7	13	15	30	62	434	22000	1860	1520	147	198	61	68
8	13	12	35	25	434	16000	1220	824	151	198	50	68
9	14	10	18	24	434	14000	997	272	135	194	50	61
10	6	10	17	24	350	11500	854	104	159	198	38	38
11	6	13	15	24	350	10500	714	167	184	208	21	19
12	21	10	14	38	514	9650	630	1150	167	222	46	29
13	122	10	23	43	531	9890	844	2670	121	213	155	28
14	144	10	16	46	389	8190	2000	2840	70	222	175	29
15	160	8	14	56	480	7790	1570	8640	54	276	249	40
16	38	6	13	32	514	8190	1910	3570	44	249	276	35
17	30	10	13	111	514	8600	1220	1570	50	249	233	54
18	29	7	12	154	531	7210	2000	606	110	249	155	31
19	53	5	10	114	426	6460	14700	330	75	249	155	27
20	24	5	11	134	539	5400	2340	198	118	282	167	57
21	128	8	12	271	514	4160	2920	225	171	276	147	33
22	128	12	14	343	472	3620	2240	300	208	222	135	21
23	95	13	13	236	449	3120	3420	300	155	276	143	29
24	144	15	12	280	300	2740	3940	250	244	288	155	28
25	60	6	32	267	220	2560	2560	175	265	306	151	23
26	36	12	56	305	228	2340	2450	175	254	402	143	25
27	17	10	66	167	434	2220	1950	200	249	416	155	29
28	12	8	76	196	489	2040	2240	150	300	389	135	33
29	8	....	100	220	472	1990	1680	200	208	276	135	54
30	18	....	100	280	228	1910	1240	200	175	208	132	42
31	20	....	95	....	122	....	777	135	....	110	....	23
Total	1422	294	917	3931	11676	306713	70476	49983	5515	7529	3789	1792
Mean	45.9	10.5	29.6	131	377	10200	2270	1610	184	243	126	57.8
Max	160	18	100	343	539	61100	14700	10800	777	416	276	324
Min	6	5	9	24	100	396	630	104	44	110	21	19
Acre-ft.	2820	583	1820	7800	23200	607000	140000	99000	10900	14900	7500	3550

Discharge of Arkansas River at La Junta for 1922

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12	269	125	56	50	468	565	90	80	....	....	....
2	16	150	65	69	48	371	600	480	45	....	....	....
3	17	81	42	47	53	404	521	69	45	....	....	....
4	22	28	30	29	130	674	550	31	52	....	....	....
5	18	12	24	22	154	647	575	118	67	....	....	....
6	14	12	26	34	122	464	545	102	64	....	....	....
7	16	15	25	27	139	352	502	64	56	....	....	....
8	16	15	27	28	141	255	487	45	67	....	....	....
9	10	11	30	27	228	555	497	42	56	....	....	....
10	10	5	29	29	310	611	422	45	36	....	....	....
11	9	475	24	128	331	445	427	44	34	....	....	....
12	10	475	23	56	335	350	422	37	36	....	....	....
13	7	170	24	30	316	483	436	34	42	....	....	....
14	187	125	18	30	231	565	404	30	40	....	....	....
15	187	28	16	28	214	468	379	37	28	....	....	....
16	200	22	16	25	74	717	306	38	27	....	....	....
17	82	26	15	29	48	836	282	28	48	....	....	....
18	16	15	14	43	27	668	296	21	73	....	....	....
19	9	14	20	48	16	684	282	23	24	....	....	....
20	16	8	20	43	30	590	313	74	17	....	....	....
21	50	5	16	62	62	717	182	210	40	....	....	....
22	195	12	14	101	145	695	161	174	26	....	....	....
23	195	22	14	104	262	642	114	196	14	....	....	....
24	208	33	14	128	265	876	147	187	15	....	....	....
25	220	27	14	168	320	756	110	125	19	....	....	....
26	260	14	19	225	409	668	98	69	11	....	....	....
27	250	3	29	163	487	626	193	30	12	....	....	....
28	273	46	68	80	700	492	69	26	10	....	....	....
29	228	....	56	46	647	560	54	23	10	....	....	....
30	216	....	58	47	530	606	105	25	12	....	....	....
31	273	....	66	....	343	....	80	142	....	....	....	....
Total	3242	2118	981	1952	7167	17255	10124	2659	1106	....	....	....
Mean	105	75.6	31.6	65.1	231	575	327	85.8	36.9	....	....	....
Max	....	....	....	225	700	876	600	480	80	....	....	....
Min	....	....	14	22	16	255	54	21	10	....	....	....
Acre-ft.	6460	4200	1940	3870	14200	34200	20100	5280	2200	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Lamar for 1921

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	110	125	120	14	12	28	3500	1410	157	8	10	5
2	110	120	120	18	8	47	1810	9400	125	7	9	9
3	110	134	116	15	8	36	1640	6500	133	8	8	25
4	110	134	127	7	8	305	1900	9700	96	8	8	150
5	120	145	123	6	7	87300	2210	4960	79	8	8	250
6	110	106	116	8	10	33200	2000	2550	84	7	6	150
7	90	97	100	6	28	28000	1640	1750	108	7	8	140
8	110	113	116	5	7	23400	1640	1540	77	7	6	150
9	110	113	174	5	31	15500	1330	1480	65	7	6	160
10	105	106	174	4	20	13000	1130	1110	52	7	8	150
11	100	130	123	4	20	10700	1070	658	46	6	8	150
12	100	120	116	3	23	9560	910	465	54	7	6	150
13	110	134	116	7	23	9000	590	1110	102	6	5	135
14	100	94	123	4	16	8460	670	1680	65	6	8	135
15	125	127	84	36	43	8460	1560	3180	21	6	8	125
16	130	127	90	8	38	11400	630	9400	19	6	6	152
17	125	127	84	4	28	10700	2440	4250	18	5	9	160
18	125	110	84	4	20	10100	2950	1820	17	6	10	32
19	110	134	47	5	20	9000	10600	1230	17	5	10	30
20	125	123	36	7	43	8460	15900	658	13	6	6	20
21	110	90	36	9	14	6900	6500	840	13	6	7	20
22	205	84	36	10	8	6430	3920	658	10	6	10	20
23	205	63	36	10	8	5560	3760	658	11	12	8	20
24	190	63	28	25	28	4780	4600	538	8	6	6	25
25	225	87	28	13	8	4430	4420	430	9	9	10	30
26	170	130	20	34	7	4430	3610	366	9	9	5	30
27	150	130	20	20	8	4780	3610	398	11	12	6	40
28	130	130	20	38	8	4780	2800	366	9	70	7	40
29	115	....	20	15	12	3500	2670	306	6	99	7	37
30	110	....	20	7	187	3500	2200	198	9	66	8	29
31	125	....	20	....	58	....	1610	198	....	26	....	24
Total	3970	3196	2473	351	759	345746	95820	69807	1443	454	227	2593
Mean	128	114	79.8	11.7	24.5	11500	3090	2250	48.1	14.6	7.57	83.6
Max	....	....	174	38	187	87300	15900	9700	157	99	10	....
Min	....	....	20	3	7	28	590	198	6	5	5	....
Acre-ft.	7870	6330	4910	696	1510	684000	190000	138000	2860	960	450	5140

Discharge of Arkansas River at Lamar for 1922

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25	275	40	7	10	14	12	308	2	....	....	....
2	25	285	100	6	10	13	6	270	2	....	....	....
3	26	265	170	7	11	22	92	574	2	....	....	....
4	128	228	255	9	11	29	8	85	2	....	....	....
5	100	220	385	8	10	10	8	948	3	....	....	....
6	84	242	260	8	10	18	7	76	2	....	....	....
7	54	215	183	7	9	9	7	373	1	....	....	....
8	80	242	51	8	9	8	6	266	1	....	....	....
9	82	250	23	7	9	6	5	32	1	....	....	....
10	123	260	31	9	9	6	5	3	2	....	....	....
11	135	250	19	23	9	8	6	3	2	....	....	....
12	57	450	16	150	9	8	5	2	1	....	....	....
13	70	350	25	111	8	7	5	2	2	....	....	....
14	112	400	15	16	7	7	5	2	2	....	....	....
15	172	365	14	12	8	7	7	2	2	....	....	....
16	148	248	14	10	7	6	5	2	2	....	....	....
17	148	62	12	10	8	11	5	2	1	....	....	....
18	96	70	21	11	3	7	5	2	1	....	....	....
19	65	50	120	11	3	42	4	2	1	....	....	....
20	57	50	148	11	4	9	4	1	2	....	....	....
21	82	50	104	11	4	6	4	1	2	....	....	....
22	162	42	23	12	4	6	5	2	1	....	....	....
23	148	20	11	12	4	4	4	2	2	....	....	....
24	175	68	10	12	4	7	4	2	1	....	....	....
25	200	130	9	14	4	5	4	2	2	....	....	....
26	200	100	9	18	6	14	4	2	1	....	....	....
27	225	72	8	11	5	6	4	2	2	....	....	....
28	250	35	8	189	6	5	4	2	2	....	....	....
29	265	....	7	117	6	14	4	2	2	....	....	....
30	315	....	6	12	16	6	16	2	2	....	....	....
31	285	....	6	....	62	....	966	2	....	....	....	....
Total	4094	5294	2103	849	285	320	1226	2973	51	....	....	....
Mean	132	189	67.8	28.3	9.2	10.7	39.5	95.9	1.70	....	....	....
Max	315	450	385	189	62	42	966	948	3	....	....	....
Min	25	20	6	6	3	4	4	1	1	....	....	....
Acre-ft.	8120	10500	4170	1680	566	637	2430	5900	101	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Arkansas River at Holly for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	220	205	200	116	36	26	2110	2830	389	64	132	43
2	225	200	238	116	36	36	1960	2830	254	28	122	41
3	225	215	238	116	19	26	1750	7920	196	33	122	41
4	220	215	332	62	19	15	1620	10100	232	30	97	64
5	225	225	284	38	20	44800	1670	4740	97	46	82	239
6	230	220	238	34	20	59500	1860	3240	145	46	82	307
7	220	190	238	32	41	35000	2110	2280	232	53	75	338
8	230	180	200	43	41	15600	1780	1940	122	57	71	330
9	210	200	344	43	32	11800	1700	1460	132	68	57	268
10	210	200	344	41	32	10000	1320	1620	87	53	92	338
11	205	190	284	41	25	7300	1180	1460	75	46	107	335
12	212	220	284	32	36	7300	1050	1050	41	71	107	300
13	215	200	238	46	15	7100	930	820	38	82	117	300
14	225	215	284	36	15	7220	1600	1780	64	117	107	275
15	215	180	168	41	26	7200	2290	1460	64	97	122	240
16	225	200	116	36	48	8700	2280	6350	82	92	102	250
17	240	200	200	168	48	8590	3460	6350	68	107	57	250
18	225	200	116	78	26	8590	2930	3460	41	92	46	200
19	225	180	116	78	26	7920	7380	2200	38	102	71	140
20	210	205	116	62	48	7340	10200	1460	64	92	68	140
21	220	195	140	26	62	6640	5350	1180	92	97	50	130
22	210	180	200	26	48	6720	2830	990	82	122	82	130
23	290	160	238	26	48	5230	2640	930	46	87	92	130
24	290	160	168	22	48	3870	2550	820	41	102	60	135
25	275	190	168	22	48	3680	2640	820	41	132	57	135
26	300	230	168	26	36	3280	2460	667	50	107	71	140
27	260	230	238	19	26	3220	2110	524	33	112	82	150
28	230	230	200	36	26	3240	2020	432	41	97	71	150
29	210	....	168	36	15	2500	1700	346	53	151	53	150
30	195	....	140	36	15	2350	1460	346	64	196	46	145
31	195	....	116	....	15	....	4450	268	....	132	....	135
Total	7087	5615	6522	1534	996	294793	81380	72673	3004	2711	2500	5969
Mean	229	201	210	51.1	32.1	9830	2620	2340	100	87.4	83.3	193
Max	....	....	344	168	62	59500	10200	10100	389	196	132	338
Min	....	....	116	19	15	15	930	268	33	30	46	....
Acre-ft.	14100	11200	12900	3040	1970	585000	161000	144000	5950	5370	4960	11900

Discharge of Arkansas River at Holly for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	150	385	170	110	472	91	6	380	10	....	....	....
2	150	375	180	102	279	60	7	196	10	....	....	....
3	150	365	240	116	252	42	18	650	10	....	....	....
4	150	330	290	116	218	34	39	461	9	....	....	....
5	225	320	340	116	224	37	20	472	9	....	....	....
6	210	340	450	110	196	28	17	800	7	....	....	....
7	200	315	400	86	246	28	16	406	6	....	....	....
8	160	340	300	86	207	22	13	1130	6	....	....	....
9	170	350	300	86	182	21	12	596	4	....	....	....
10	180	360	300	89	147	19	16	259	7	....	....	....
11	224	350	300	74	123	19	15	187	7	....	....	....
12	230	350	306	218	102	18	20	143	5	....	....	....
13	200	550	235	246	99	14	21	119	6	....	....	....
14	210	500	173	210	96	16	16	94	6	....	....	....
15	250	450	164	110	126	14	13	88	6	....	....	....
16	300	465	150	101	105	16	11	88	6	....	....	....
17	254	350	143	101	88	29	11	76	6	....	....	....
18	254	350	147	107	81	20	10	71	6	....	....	....
19	200	305	173	104	76	18	9	56	5	....	....	....
20	165	290	286	103	64	25	7	47	5	....	....	....
21	160	290	266	110	76	15	5	42	5	....	....	....
22	180	270	235	116	62	11	4	34	4	....	....	....
23	262	265	191	110	58	10	4	32	3	....	....	....
24	248	250	155	110	54	10	3	30	3	....	....	....
25	275	200	140	105	47	8	3	29	3	....	....	....
26	300	230	136	105	47	8	3	38	3	....	....	....
27	300	240	123	224	51	4	3	30	3	....	....	....
28	325	200	102	623	42	4	3	25	3	....	....	....
29	350	....	105	1730	37	5	4	19	4	....	....	....
30	350	....	136	770	49	5	6	18	4	....	....	....
31	415	....	150	....	56	....	9	12	....	....	....	....
Total	7197	9385	6786	6394	3962	651	344	6623	171	....	....	....
Mean	232	335	219	213	128	21.7	11.1	214	5.70	....	....	....
Max	....	....	....	1730	472	91	39	1130	10	....	....	....
Min	....	....	102	74	37	4	3	12	3	....	....	....
Acre-ft.	14300	18600	13500	12700	7870	1290	683	13200	339	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Cottonwood Creek Below Buena Vista Hot Springs for 1921
Drainage Area, 72 Square Miles. Altitude, 8,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	25	24	24	24	24	305	204	94	99	34	28	26
2........	25	24	26	24	24	284	194	89	99	38	27	26
3........	25	25	25	24	26	271	194	82	99	35	27	26
4........	25	25	25	23	33	284	194	79	75	34	26	24
5........	26	24	25	23	59	271	187	72	68	34	26	23
6........	25	24	25	23	66	262	171	66	66	33	25	24
7........	25	24	25	22	46	242	168	61	66	37	25	23
8........	25	24	25	22	42	254	168	56	62	35	24	23
9........	24	24	24	23	39	305	158	56	54	35	23	24
10........	24	24	24	23	36	350	155	56	50	34	23	25
11........	24	24	24	23	40	397	149	62	50	34	22	25
12........	24	24	24	23	46	470	141	59	49	34	22	25
13........	24	24	24	23	59	422	174	59	49	34	22	25
14........	24	24	24	23	61	446	181	62	44	33	23	25
15........	26	24	25	23	66	446	181	64	46	32	26	25
16........	24	24	25	22	66	446	181	64	42	32	26	24
17........	24	24	25	23	69	397	174	62	43	32	26	22
18........	24	24	25	24	66	328	171	59	44	32	22	25
19........	24	24	25	24	54	271	171	55	43	31	22	26
20........	25	24	26	24	44	254	155	62	40	31	23	25
21........	24	24	25	24	62	230	147	69	40	31	26	25
22........	24	24	25	24	77	230	149	72	38	30	26	24
23........	24	25	24	26	82	271	141	82	36	30	26	26
24........	24	26	24	28	94	271	161	75	36	30	26	23
25........	24	24	24	25	94	271	181	69	35	30	27	25
26........	24	24	25	25	96	242	155	72	34	28	26	25
27........	24	24	24	24	122	242	127	69	33	26	25	24
28........	24	24	24	24	187	254	122	66	33	27	25	24
29........	24	....	25	24	242	230	99	64	33	26	26	24
30........	24	....	25	23	328	215	89	62	33	24	26	25
31........	24	....	24	....	305	....	89	64	....	28	....	24
Total	756	677	764	710	2655	9161	4931	2083	1539	984	747	760
Mean..	24.4	24.2	24.6	23.7	85.6	305	159	67.2	51.3	31.7	24.9	24.5
Max....	26	26	26	28	328	470	204	94	99	38	28	26
Min.....	24	24	24	22	24	215	89	55	33	24	22	22
Acre-ft.	1500	1340	1510	1410	5260	18100	9780	4130	3050	1950	1480	1510

Discharge of Cottonwood Creek Near Buena Vista Hot Springs for 1922.
Drainage Area, 72 Square Miles. Altitude, 8,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	24	21	20	20	25	131	148	57	43	....	....	....
2........	23	21	20	20	28	153	131	53	44	....	....	....
3........	24	21	20	20	28	168	121	52	48	....	....	....
4........	22	21	20	21	32	159	114	48	47	....	....	....
5........	21	21	20	21	48	202	112	44	44	....	....	....
6........	21	21	20	20	67	228	103	44	41	....	....	....
7........	22	21	20	20	78	252	99	44	40	....	....	....
8........	24	21	20	20	71	269	92	41	38	....	....	....
9........	24	21	20	20	65	282	82	38	36	....	....	....
10........	23	21	20	21	52	296	114	38	35	....	....	....
11........	23	21	20	20	38	305	94	37	33	....	....	....
12........	22	21	20	21	32	269	88	35	33	....	....	....
13........	22	21	20	20	34	260	73	40	32	....	....	....
14........	22	21	20	19	35	260	68	49	32	....	....	....
15........	22	21	20	20	41	228	62	61	31	....	....	....
16........	22	21	20	19	35	202	60	65	31	....	....	....
17........	23	21	20	19	37	191	54	81	31	....	....	....
18........	22	21	20	19	62	191	58	81	29	....	....	....
19........	22	21	20	19	71	184	57	88	28	....	....	....
20........	21	21	21	19	94	188	53	81	28	....	....	....
21........	21	21	21	20	94	178	55	68	28	....	....	....
22........	21	20	21	20	94	178	52	68	27	....	....	....
23........	21	20	21	21	103	159	52	61	27	....	....	....
24........	21	20	21	22	117	159	48	61	26	....	....	....
25........	21	20	21	22	131	159	46	57	26	....	....	....
26........	21	20	21	22	159	153	43	54	26	....	....	....
27........	22	20	21	22	191	148	42	53	25	....	....	....
28........	21	20	21	22	228	137	44	49	26	....	....	....
29........	21	....	21	22	191	129	48	48	26	....	....	....
30........	21	....	20	22	220	148	46	47	26	....	....	....
31........	21	....	20	....	168	....	52	47	....	....	....	....
Total	681	581	630	613	2669	5966	2311	1690	987	....	....	....
Mean..	22.0	20.8	20.3	20.4	86.1	199	74.5	54.5	32.9	....	....	....
Max....	24	21	21	22	228	305	148	88	48	....	....	....
Min.....	21	20	20	19	25	129	42	35	25	....	....	....
Acre-ft.	1350	1160	1250	1210	5290	11800	4580	3350	1960	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Fork Arkansas at Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	17	7.5	74	0	0	0.2	....	....	....
2	....	....	....	20	9.5	28	1.4	0.3	0.2	....	....	....
3	....	....	....	23	7.5	17	0.1	0	0.2	....	....	....
4	....	....	....	22	7.5	12	0.1	0	0.2	....	....	....
5	....	....	....	22	14	38	0	0	0.2	....	....	....
6	....	....	....	24	17	105	0	0	0.2	....	....	....
7	....	....	....	22	17	83	0	0	0.2	....	....	....
8	....	....	....	20	33	94	0.1	0	0.3	....	....	....
9	....	....	....	24	28	105	0	0	0.3	....	....	....
10	....	....	....	24	33	105	0	0	0.2	....	....	....
11	....	....	....	20	24	94	0	0	0.2	....	....	....
12	....	....	....	24	17	74	0	0	0.2	....	....	....
13	....	....	....	20	14	64	0	0	0.2	....	....	....
14	....	....	....	17	12	50	0	0	0.2	....	....	....
15	....	....	....	17	14	38	0	0	0.1	....	....	....
16	....	....	....	17	12	38	0	0.2	0.1	....	....	....
17	....	....	....	14	14	24	0	0	0.1	....	....	....
18	....	....	....	14	17	20	5.5	0	0.1	....	....	....
19	....	....	....	17	24	14	1.7	0	0.1	....	....	....
20	....	....	....	14	20	12	0.2	0	0.1	....	....	....
21	....	....	....	14	20	0.5	0	0	0.2	....	....	....
22	....	....	....	12	24	0	0	0	0.2	....	....	....
23	....	....	....	12	28	0	0	0	0.2	....	....	....
24	....	....	....	12	105	0	0	0	0.2	....	....	....
25	....	....	....	12	132	0	0	0	0.2	....	....	....
26	....	....	....	9.5	164	0	0	0	0.2	....	....	....
27	....	....	....	9.5	220	0	0	0.1	0.2	....	....	....
28	....	....	....	9.5	264	0	0	0.2	0.2	....	....	....
29	....	....	....	12	315	0.1	0	0.2	0.2	....	....	....
30	....	....	....	9.5	164	0.2	0	0.2	0.2	....	....	....
31	....	....	....	....	119	....	0	0.2	....	....	....	....
Total	....	....	....	504	1897	1089.8	9.1	1.4	5.6	....	....	....
Mean	....	....	....	16.8	61.2	36.3	0.29	.045	.187	....	....	....
Max	....	....	....	24	315	105	5.5	0.3	0.3	....	....	....
Min	....	....	....	9.5	7.5	0	0	0	0.1	....	....	....
Acre-ft.	....	....	....	1000	3760	2160	17.8	2.8	11.1	....	....	....

Discharge of Fountain River at Colorado Springs for 1922

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	31	26	150	62	37	15	....	....	....
2	....	....	....	33	25	131	62	37	16	....	....	....
3	....	....	....	36	24	131	34	31	16	....	....	....
4	....	....	....	38	31	113	29	24	14	....	....	....
5	....	....	....	47	26	113	38	31	13	....	....	....
6	....	....	....	48	31	97	33	27	10	....	....	....
7	....	....	....	45	30	67	29	198	10	....	....	....
8	....	....	....	115	29	48	21	30	9	....	....	....
9	....	....	....	43	28	43	21	27	8	....	....	....
10	....	....	....	42	26	38	17	31	8	....	....	....
11	....	....	....	42	27	33	9	39	9	....	....	....
12	....	....	....	42	19	33	14	36	11	....	....	....
13	....	....	....	51	16	29	11	33	10	....	....	....
14	....	....	....	41	15	25	13	27	10	....	....	....
15	....	....	....	48	23	22	13	24	11	....	....	....
16	....	....	....	45	16	18	16	21	10	....	....	....
17	....	....	....	46	11	113	16	20	11	....	....	....
18	....	....	....	45	6	54	13	50	10	....	....	....
19	....	....	....	35	10	33	44	45	11	....	....	....
20	....	....	....	36	10	15	68	28	11	....	....	....
21	....	....	....	33	15	171	62	24	12	....	....	....
22	....	....	....	34	15	202	50	24	11	....	....	....
23	....	....	....	41	10	191	32	25	10	....	....	....
24	....	....	....	45	10	191	16	24	11	....	....	....
25	....	....	....	75	6	167	11	21	11	....	....	....
26	....	....	....	74	4	146	8	19	12	....	....	....
27	....	....	....	54	261	52	8	15	11	....	....	....
28	....	....	....	37	193	40	51	15	11	....	....	....
29	....	....	32	31	150	40	63	14	11	....	....	....
30	....	....	42	30	150	154	31	14	12	....	....	....
31	....	....	30	....	150	....	27	15	....	....	....	....
Total	....	....	....	1363	1393	2660	922	1006	335	....	....	....
Mean	....	....	....	45.4	44.9	88.7	29.7	32.5	11.2	....	....	....
Max	....	....	....	115	261	202	63	198	16	....	....	....
Min	....	....	....	30	4	15	8	14	8	....	....	....
Acre-ft.	....	....	....	2700	2760	5280	1830	2000	666	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Fountain River at Pueblo for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	5	64	125	1	5	8	....	....	....
2	....	....	....	6	61	170	48	228	6	....	....	....
3	....	....	....	5	66	58	9	145	4	....	....	....
4	....	....	....	6	67	45	6	58	4	....	....	....
5	....	....	....	6	52	30	3	15	3	....	....	....
6	....	....	....	8	32	17	2	139	2	....	....	....
7	....	....	....	7	32	34	2	434	2	....	....	....
8	....	....	....	7	16	2	2	134	1	....	....	....
9	....	....	....	8	11	2	2	51	1	....	....	....
10	....	....	....	75	5	2	2	29	1	....	....	....
11	....	....	....	10	13	2	2	20	1	....	....	....
12	....	....	....	11	12	1	2	9	1	....	....	....
13	....	....	....	9	15	1	2	7	1	....	....	....
14	....	....	....	9	12	1	2	3	1	....	....	....
15	....	....	....	8	25	1	2	3	1	....	....	....
16	....	....	....	8	37	1	2	2	11	....	....	....
17	....	....	....	10	38	1	2	22	3	....	....	....
18	....	....	....	11	45	1	2	1	2	....	....	....
19	....	....	....	10	64	2	2	468	1	....	....	....
20	....	....	....	9	61	1	2	131	2	....	....	....
21	....	....	....	11	129	1	2	100	2	....	....	....
22	....	....	....	11	31	1	7	64	2	....	....	....
23	....	....	....	12	13	1	5	44	1	....	....	....
24	....	....	....	7	26	2	157	31	1	....	....	....
25	....	....	....	16	26	1	36	32	1	....	....	....
26	....	....	....	359	31	2	14	25	1	....	....	....
27	....	....	....	140	31	2	6	20	1	....	....	....
28	....	....	....	89	745	1	4	14	1	....	....	....
29	....	....	....	87	222	1	7	12	1	....	....	....
30	....	....	....	77	165	1	10	9	1	....	....	....
31	....	....	....	....	125	....	7	15	....	....	....	....
Total	....	....	....	1037	2272	511	352	2260	68	....	....	....
Mean	....	....	....	34.6	73.3	17.0	11.4	72.9	2.27	....	....	....
Max	....	....	....	359	745	170	157	468	11	....	....	....
Min	....	....	....	....	5	1	1	1	1	....	....	....
Acre-ft.	....	....	....	2060	4510	1010	701	4480	135	....	....	....

Discharge of St. Charles River Near Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	8	12	29	17	33	2	....	....	....
2	....	....	....	8	12	25	27	35	3	....	....	....
3	....	....	....	8	12	36	12	17	3	....	....	....
4	....	....	....	8	10	28	5	12	3	....	....	....
5	....	....	....	8	9	16	2	17	2	....	....	....
6	....	....	....	8	8	17	2	64	3	....	....	....
7	....	....	....	8	22	14	2	27	3	....	....	....
8	....	....	....	8	20	14	2	14	4	....	....	....
9	....	....	....	7	16	13	2	14	3	....	....	....
10	....	....	....	7	9	10	1	53	3	....	....	....
11	....	....	....	7	7	9	2	14	3	....	....	....
12	....	....	....	7	4	6	2	10	4	....	....	....
13	....	....	....	7	4	4	3	6	3	....	....	....
14	....	....	....	7	3	3	2	6	3	....	....	....
15	....	....	....	6	8	2	3	6	2	....	....	....
16	....	....	....	5	12	12	4	6	3	....	....	....
17	....	....	....	6	7	17	4	5	2	....	....	....
18	....	....	....	10	9	11	12	4	3	....	....	....
19	....	....	....	9	17	8	6	4	2	....	....	....
20	....	....	....	8	11	8	5	4	2	....	....	....
21	....	....	....	6	9	6	4	4	2	....	....	....
22	....	....	....	7	9	3	3	4	2	....	....	....
23	....	....	....	7	10	5	2	4	2	....	....	....
24	....	....	....	8	11	6	2	4	3	....	....	....
25	....	....	....	11	14	4	2	4	2	....	....	....
26	....	....	....	29	14	4	2	4	2	....	....	....
27	....	....	....	25	25	4	2	4	2	....	....	....
28	....	....	....	16	74	6	2	3	2	....	....	....
29	....	....	....	14	31	6	2	3	2	....	....	....
30	....	....	....	12	29	7	71	3	2	....	....	....
31	....	....	....	....	30	....	60	3	....	....	....	....
Total	....	....	....	285	468	333	267	391	77	....	....	....
Mean	....	....	....	9.50	15.1	11.1	8.61	12.6	2.57	....	....	....
Max	....	....	....	29	74	36	71	64	4	....	....	....
Min	....	....	....	5	3	3	1	3	2	....	....	....
Acre-ft.	....	....	....	565	928	660	529	775	153	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Apishapa River near Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	30	68	65	92	79	11	....	....	....
2	....	....	....	30	66	52	108	1140	8	....	....	....
3	....	....	....	50	61	75	75	50	9	....	....	....
4	....	....	....	50	52	27	49	20	9	....	....	....
5	....	....	....	50	40	22	51	60	6	....	....	....
6	....	....	....	50	31	17	61	30	8	....	....	....
7	....	....	....	50	20	24	59	112	8	....	....	....
8	....	....	....	50	13	22	47	59	10	....	....	....
9	....	....	....	50	9	21	40	64	10	....	....	....
10	....	....	....	40	8	22	47	26	9	....	....	....
11	....	....	....	50	8	28	40	13	9	....	....	....
12	....	....	....	42	11	31	61	12	9	....	....	....
13	....	....	....	42	8	26	47	26	9	....	....	....
14	....	....	....	44	7	28	44	22	8	....	....	....
15	....	....	....	78	8	27	50	17	6	....	....	....
16	....	....	....	67	8	31	51	10	6	....	....	....
17	....	....	....	67	7	43	54	11	8	....	....	....
18	....	....	....	90	6	27	51	12	8	....	....	....
19	....	....	....	105	6	31	44	13	10	....	....	....
20	....	....	....	90	6	28	55	12	11	....	....	....
21	....	....	....	72	11	32	53	12	6	....	....	....
22	....	....	....	87	13	30	66	13	5	....	....	....
23	....	....	....	92	8	35	57	12	7	....	....	....
24	....	....	....	77	7	51	57	23	7	....	....	....
25	....	....	....	68	7	63	71	11	7	....	....	....
26	....	....	....	87	6	65	176	8	9	....	....	....
27	....	....	....	86	6	64	82	13	9	....	....	....
28	....	....	....	68	35	62	42	10	8	....	....	....
29	....	....	....	68	28	65	33	9	7	....	....	....
30	....	....	....	68	22	61	36	12	6	....	....	....
31	....	....	....	....	37	....	52	8	....	....	....	....
Total	....	....	....	1898	623	1175	1851	1919	243	....	....	....
Mean	....	....	....	63.3	20.1	39.2	59.7	61.9	8.01	....	....	....
Max	....	....	....	105	68	75	176	1140	11	....	....	....
Min	....	....	....	30	6	17	33	8	5	....	....	....
Acre-ft.	....	....	....	3770	1240	2330	3670	3810	477	....	....	....

Discharge of Timpas Creek at Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	40	108	162	90	205	44	....	....	....
2	....	....	....	50	79	135	117	734	47	....	....	....
3	....	....	....	55	73	88	108	93	42	....	....	....
4	....	....	....	55	58	120	117	64	37	....	....	....
5	....	....	....	90	43	109	109	76	44	....	....	....
6	....	....	....	70	38	76	99	67	29	....	....	....
7	....	....	....	60	43	80	73	180	24	....	....	....
8	....	....	....	70	42	96	66	128	27	....	....	....
9	....	....	....	70	35	100	64	98	36	....	....	....
10	....	....	....	100	32	108	69	76	45	....	....	....
11	....	....	....	70	34	91	64	58	40	....	....	....
12	....	....	....	40	26	94	74	44	33	....	....	....
13	....	....	....	33	25	94	78	39	42	....	....	....
14	....	....	....	36	26	78	90	42	34	....	....	....
15	....	....	....	42	29	65	76	41	32	....	....	....
16	....	....	....	46	35	88	77	46	33	....	....	....
17	....	....	....	50	28	135	79	39	32	....	....	....
18	....	....	....	68	24	115	91	34	32	....	....	....
19	....	....	....	77	25	91	91	46	40	....	....	....
20	....	....	....	101	24	79	84	55	46	....	....	....
21	....	....	....	120	26	91	54	53	27	....	....	....
22	....	....	....	114	27	84	137	85	29	....	....	....
23	....	....	....	115	28	82	56	60	24	....	....	....
24	....	....	....	118	26	262	46	112	42	....	....	....
25	....	....	....	149	27	125	41	62	40	....	....	....
26	....	....	....	101	27	89	35	59	42	....	....	....
27	....	....	....	120	32	79	42	51	55	....	....	....
28	....	....	....	100	82	71	34	47	48	....	....	....
29	....	....	....	117	159	68	26	49	40	....	....	....
30	....	....	....	114	355	77	166	39	40	....	....	....
31	....	....	....	....	137	....	113	45	....	....	....	....
Total	....	....	....	2391	1753	3032	2466	2827	1126	....	....	....
Mean	....	....	....	79.7	56.5	101	79.5	91.2	37.5	....	....	....
Max	....	....	....	149	355	262	166	734	55	....	....	....
Min	....	....	....	33	24	65	26	34	24	....	....	....
Acre-ft.	....	....	....	4740	3470	6010	4890	5610	2230	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Crooked Arroya at Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	5	16	32	6	6	5	......	......	......
2	......	......	......	5	14	39	32	86	4	......	......	......
3	......	......	......	6	14	38	17	23	5	......	......	......
4	......	......	......	6	14	40	18	12	5	......	......	......
5	......	......	......	6	7	26	18	40	5	......	......	......
6	......	......	......	5	5	10	14	40	3	......	......	......
7	......	......	......	5	3	12	13	17	3	......	......	......
8	......	......	......	6	3	21	10	16	3	......	......	......
9	......	......	......	6	3	15	6	15	3	......	......	......
10	......	......	......	20	3	13	3	15	3	......	......	......
11	......	......	......	10	8	8	1	14	3	......	......	......
12	......	......	......	8	4	14	3	10	2	......	......	......
13	......	......	......	8	4	14	3	6	2	......	......	......
14	......	......	......	30	3	12	6	3	2	......	......	......
15	......	......	......	10	3	6	6	3	2	......	......	......
16	......	......	......	15	2	8	5	3	2	......	......	......
17	......	......	......	15	3	15	5	3	2	......	......	......
18	......	......	......	10	3	15	8	3	9	......	......	......
19	......	......	......	10	3	13	8	3	3	......	......	......
20	......	......	......	8	3	16	7	3	2	......	......	......
21	......	......	......	8	4	15	5	3	2	......	......	......
22	......	......	......	6	7	13	4	3	2	......	......	......
23	......	......	......	7	5	9	3	3	2	......	......	......
24	......	......	......	9	3	7	3	3	2	......	......	......
25	......	......	......	14	4	8	3	3	2	......	......	......
26	......	......	......	70	5	8	3	3	1	......	......	......
27	......	......	......	30	5	5	5	3	1	......	......	......
28	......	......	......	20	6	5	6	3	1	......	......	......
29	......	......	......	20	14	4	4	3	1	......	......	......
30	......	......	......	18	18	4	4	3	1	......	......	......
31	......	......	......	......	24	......	6	3	......	......	......	......
Total	......	......	......	396	217	445	235	354	83	......	......	......
Mean	......	......	......	13.2	7.00	14.8	7.58	11.4	2.77	......	......	......
Max	......	......	......	......	24	40	32	86	9	......	......	......
Min	......	......	......	......	2	4	1	3	1	......	......	......
Acre-ft.	......	......	......	785	430	881	466	701	165	......	......	......

Discharge of Purgatoire River at Trinidad for 1921.

Drainage Area, 742 Square Miles. Altitude, 5,990 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21	21	26	16	55	103	127	279	133	52	11	28
2	21	39	26	16	55	103	124	405	133	50	11	31
3	21	38	26	16	55	103	124	1070	133	34	11	28
4	21	37	26	16	77	2530	121	465	133	34	11	21
5	21	36	26	16	77	1220	121	163	133	32	11	12
6	21	36	26	16	103	1280	90	187	103	31	24	17
7	21	35	26	16	103	977	90	133	103	31	24	22
8	29	34	26	16	77	800	87	498	66	30	24	27
9	39	34	26	16	77	800	87	279	66	29	24	33
10	39	33	39	9	77	639	30	405	66	29	24	33
11	39	32	32	9	77	639	30	602	66	27	25	39
12	39	32	26	9	77	497	29	250	66	26	25	39
13	39	39	26	16	77	497	27	279	66	26	28	39
14	39	35	26	26	103	497	27	405	66	25	27	33
15	39	30	26	66	103	497	148	258	66	24	29	31
16	39	26	16	133	103	639	133	133	66	24	29	28
17	39	26	16	217	103	639	237	133	66	23	30	14
18	39	26	16	250	103	497	133	133	497	22	26	28
19	39	26	16	163	103	433	133	133	775	22	28	39
20	26	26	16	133	103	320	133	163	112	21	19	33
21	26	26	16	133	103	316	133	163	75	20	28	30
22	26	26	16	103	133	288	133	180	64	20	23	29
23	32	26	16	103	279	262	133	133	62	19	23	31
24	39	26	16	103	279	183	133	133	59	18	30	12
25	32	26	16	103	279	180	133	133	59	18	31	12
26	32	26	16	66	279	177	180	133	57	17	24	17
27	21	26	16	55	133	142	133	133	55	16	23	26
28	39	26	16	55	133	139	77	133	55	16	21	25
29	21	......	16	55	133	136	77	133	53	15	25	25
30	16	......	16	55	133	133	77	133	52	11	28	23
31	16	......	16	......	103	......	77	133	......	11	......	23
Total	931	849	665	2006	3695	15666	3317	7912	3506	773	697	828
Mean	30.0	30.3	21.5	66.9	119	522	107	255	117	24.9	23.2	26.7
Max	39	39	39	250	279	2530	237	1070	497	52	31	39
Min	16	21	16	9	55	103	27	133	52	11	11	12
Acre-ft.	1840	1680	1320	3980	7320	31100	6580	15700	6960	1530	1380	1640

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Purgatoire River at Trinidad for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13	22	40	24	30	233	350	16	57	....	....	....
2	23	22	46	23	30	361	216	17	78	....	....	....
3	20	20	46	23	31	300	167	53	164	....	....	....
4	11	20	40	22	37	171	116	68	78	....	....	....
5	10	20	37	21	38	157	225	64	76	....	....	....
6	10	22	26	20	37	160	216	42	73	....	....	....
7	17	22	20	20	55	171	122	76	65	....	....	....
8	27	24	24	19	59	182	96	74	50	....	....	....
9	24	24	14	18	64	189	78	72	48	....	....	....
10	23	25	30	17	82	182	68	64	47	....	....	....
11	22	59	26	17	82	272	61	57	46	....	....	....
12	20	32	31	16	64	719	61	55	44	....	....	....
13	19	34	20	17	50	178	68	45	43	....	....	....
14	20	30	15	17	50	164	59	61	41	....	....	....
15	27	24	14	16	62	150	37	66	40	....	....	....
16	27	30	16	16	82	134	28	64	39	....	....	....
17	19	30	21	16	78	137	27	82	37	....	....	....
18	19	30	17	14	68	171	26	80	36	....	....	....
19	21	26	30	14	68	122	28	122	34	....	....	....
20	23	20	40	10	66	113	28	98	33	....	....	....
21	23	19	35	9	72	103	62	113	31	....	....	....
22	23	19	40	9	84	86	100	98	30	....	....	....
23	25	11	32	11	84	78	150	78	29	....	....	....
24	25	16	30	14	88	93	40	68	27	....	....	....
25	25	30	29	16	116	86	55	59	26	....	....	....
26	25	30	29	27	119	78	53	48	26	....	....	....
27	27	15	28	35	122	72	25	43	24	....	....	....
28	25	24	27	26	131	62	20	53	26	....	....	....
29	23	....	26	30	128	78	17	68	19	....	....	....
30	23	....	26	31	134	88	52	78	19	....	....	....
31	23	....	25	....	204	....	272	62	....	....	....	....
Total	662	700	880	568	2415	5090	2923	2044	1386	....	....	....
Mean	21.4	25.0	28.4	18.9	77.9	170	94.3	65.9	46.2	....	....	....
Max	....	....	46	35	204	719	350	122	164	....	....	....
Min	....	....	14	9	30	62	17	16	19	....	....	....
Acre-ft.	1320	1390	1750	1120	4790	10100	5800	4050	2750	....	....	....

Discharge of Purgatoire River near Mouth for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	8	16	30	44	430	6	....	....	....
2	....	....	....	8	12	25	177	700	8	....	....	....
3	....	....	....	8	7	130	140	350	7	....	....	....
8	....	....	....	8	6	71	61	136	6	....	....	....
5	....	....	....	8	7	103	26	67	7	....	....	....
6	....	....	....	8	4	61	23	39	7	....	....	....
7	....	....	....	8	3	50	33	78	7	....	....	....
8	....	....	....	8	5	40	16	32	8	....	....	....
9	....	....	....	8	4	27	19	44	7	....	....	....
10	....	....	....	8	3	23	14	65	8	....	....	....
11	....	....	....	8	130	26	15	19	7	....	....	....
12	....	....	....	20	9	30	29	15	7	....	....	....
13	....	....	....	75	9	30	19	9	6	....	....	....
14	....	....	....	40	6	40	16	7	7	....	....	....
15	....	....	....	50	2	56	15	6	9	....	....	....
16	....	....	....	35	2	47	12	5	8	....	....	....
17	....	....	....	30	2	47	10	5	8	....	....	....
18	....	....	....	20	2	43	13	5	8	....	....	....
19	....	....	....	20	6	63	83	7	7	....	....	....
20	....	....	....	20	6	39	60	6	7	....	....	....
21	....	....	....	15	6	40	12	5	7	....	....	....
22	....	....	....	15	9	28	7	6	7	....	....	....
23	....	....	....	15	7	33	10	9	6	....	....	....
24	....	....	....	16	7	36	34	10	7	....	....	....
25	....	....	....	23	6	39	173	6	7	....	....	....
26	....	....	....	37	6	39	233	6	8	....	....	....
27	....	....	....	28	6	46	58	6	9	....	....	....
28	....	....	....	23	6	42	30	6	9	....	....	....
29	....	....	....	26	7	40	20	6	8	....	....	....
30	....	....	....	103	181	40	1630	6	8	....	....	....
31	....	....	....	....	71	....	750	6	....	....	....	....
Total	....	....	....	699	553	1364	3782	2097	221	....	....	....
Mean	....	....	....	23.3	17.8	45.5	122	67.6	7.40	....	....	....
Max	....	....	....	103	181	130	1630	700	9	....	....	....
Min	....	....	....	8	2	23	7	5	6	....	....	....
Acre-ft.	....	....	....	1390	1090	2710	7500	4160	440	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

RIO GRANDE DRAINAGE

D. S. JONES, JR., HYDROGRAPHER

RIO GRANDE RIVER AT THIRTY-MILE BRIDGE, NEAR CREEDE

Location—In the Rio Grande National Forest, about 30 miles southwest of Creede, in Sec. 13, T. 40 N., R. 4 W., a short distance above mouth of Squaw Creek.

Records Available—June 18, 1909, to September 30, 1922.

Drainage Area—163 square miles.

Gage—Staff gage. In still well.

Channel—Section is gradually filling in.

Discharge Measurements—Made from car and cable except during low stages, when they are made by wading.

Winter Flow—Ice causes backwater during the winter months and records are discontinued.

Artificial Control—A short distance above the station, the San Luis Valley Irrigation District has constructed the large Rio Grande Reservoir, which materially modifies the flow of the river; also Lost Lake Reservoir.

Accuracy—Results considered good.

Co-operation—Station maintained in co-operation with San Luis Valley Irrigation District.

RIO GRANDE AT WASON, NEAR CREEDE

Location—In the Rio Grande National Forest, at a highway bridge in about Sec. 8, T. 41 N., R. 1 E., a quarter of a mile from Wason siding and 3 miles southeast of Creede. Nearest tributary, Willow or Goblin Creek, enters a short distance upstream.

Records Available—April 24, 1907, to September 30, 1922.

Drainage Area—689 square miles.

Gage—An automatic recording gage.

Channel—Practically permanent.

Discharge Measurements—Made from bridge.

Winter Flow—River frozen over during winter months; ice causes backwater at gage.

Reservoirs—Daily, monthly and annual discharges modified by storage in the Rio Grande and Santa Maria Reservoirs, 30 miles above.

Accuracy—Good.

RIO GRANDE NEAR DEL NORTE

Location—At highway bridge in about Sec. 30, T. 40 N., R. 5 E., 6 miles west of Del Norte, a short distance below the mouth of Wolf Creek. From October 11, 1889, to November 30, 1906, a station was maintained about 4 miles below the present station and just above Los Pinos Creek. The flow at the two points is comparable, if a few small ditches are disregarded.

Records Available—May 16, 1908, to September 30, 1922.

Drainage Area—1,400 square miles.

Gage—Automatic recording gage. The gage is referred to the same datum as was the chain gage installed May 16, 1908.

Channel—Slightly shifting at sides from silt deposition at low water.

Discharge Measurements—Made from bridge.

Winter Flow——River is frozen over during the winter months.

Reservoirs—Daily, monthly, and annual discharges modified by storage in Beaver Park, Santa Maria and Rio Grande Reservoirs.

RIO GRANDE AT ALAMOSA

Location—At Concrete road bridge in Alamosa, one-third of a mile above D. & R. G. Railroad bridge, where station was originally established in 1894, discontinued in 1895, and re-established in 1912. The flow at the two points is comparable, except for one small ditch diversion. Records initiated by State of Colorado April 19, 1914.

Records Available—Discharge measurements and gage heights September 24, 1894, to December 31, 1895. Miscellaneous measurements, 1903 and 1910. Daily discharges, May 15, 1912, to September 30, 1922.

Drainage Area—Not measured.

Gage—An automatic recording gage.

Channel—Shifting sand.

Discharge Measurements—From concrete road bridge at high water and by wading at low water.

Winter Flow—Ice cover forms during winter months.

RIO GRANDE NEAR LOBATOS

Location—At highway bridge in Sec. 22, T. 33 N., R. 11 E., 10 miles east of Lobatos and a few miles above the Colorado-New Mexico line; 17 miles below mouth of Conejos River.

Records Available—June 28, 1899, to September 30, 1922.

Drainage Area—7,700 square miles.

Gage—Automatic recording gage. This gage is referred to the datum of the original gage.

Channel—A gash cut in lava rock; shifting blanket of sand.

Discharge Measurements—Made from bridge during high stages and by wading at low stages.

Winter Flow—Ice causes backwater varying in amount during the three winter months.

SOUTH FORK OF RIO GRANDE AT SOUTH FORK

Location—At highway bridge half a mile west of South Fork station, in Sec. 34, T. 40 N., R. 3 E. No tributaries between the station and the mouth, and none for several miles above.

Records Available—August 9, 1910, to September 30, 1922. Also a number of discharge measurements made in 1909 by the United States Geological Survey.

Drainage Area—216 square miles.

Gage—Chain gage established May 12, 1912, at the side of the original gage, but referred to a different datum. The original gage was washed out by flood October 5, 1911, and was replaced by an inclined staff gage at the railroad bridge at different datum, October 16, 1911. This gage was read until May 12, 1912.

Channel—Gradually getting lower.

Discharge Measurements—Made from bridge.

Winter Flow—Ice causes backwater during the winter months.

Reservoirs—Daily and monthly discharges modified by storage in Beaver Park Reservoir.

PINOS CREEK NEAR DEL NORTE

Location—In Sec. 32, T. 39 N., R. 5 E. N. M. P. M., at Kernens Ranch, about 10 miles southwest of Del Norte. Bennett Creek enters 1,000 feet above station.

Drainage Area—53 square miles.

Records Available—May 1, 1919, to September 30, 1922.

Gage—Vertical staff gage 200 feet southwest of barn at Kernens Ranch. Gage during 1919 was located 150 feet below this point.

Discharge Measurements—Made from footbridge during high water and wading at low stages.

Accuracy—Results considered good.

ROCK CREEK NEAR MONTE VISTA

Location—In Sec. 32, T. 38 N., R. 7 E., at the Cadle Ranch, 9 miles southwest of Monte Vista.

Records Available—April 1, 1919, to September 30, 1922.

Drainage Area—38 square miles.

Gage—Vertical staff 75 feet below wagon bridge at Cadle Ranch.

Discharge Measurements—Wading at all stages for years 1919 to 1922.

Winter Flow—Complete ice cover in winter. No records kept.

Accuracy—Records considered good.

ALAMOSA RIVER BELOW TERRACE RESERVOIR

Location—One-fourth mile below Terrace Dam, in Sec. 23 T. 36 N., R. 6 E. of New Mexico meridian.

Records Available—April 18, 1909, to November 30, 1912; April 1, 1915, to October 31, 1915; February 1, 1917, to October 31, 1920; April 1-September 30, 1922.

Gage—Vertical staff gage bolted to left cliff at station. Gage location has been changed several times since station was established. Bristol gage installed May 7, 1915, referred to staff gage.

Channel—Shifting during high water.

Discharge Measurements—Made from cable at high stages and by wading at low stages.

Winter Flow—Ice causes backwater effect and station is discontinued during the winter months.

Diversions—There are no decreed diversions above this station.

Accuracy—Although channel shifts somewhat, enough measurements have been made to make the estimates of discharge reliable.

Co-operation—Station maintained in co-operation with the Terrace Irrigation District.

LA JARA CREEK NEAR CAPULIN

Location—In Sec. 29, T. 34 N., R. 7 E., 13 miles above Capulin.

Records Available—April, 1916, to November 30, 1917; April 1, 1919, to September 30, 1922.

Drainage Area—73 square miles.

Gage—Bristol automatic.

Channel—Fairly permanent.

Discharge Measurements—By wading 25 to 40 feet below gage, except at extreme high water, when measurements are made from highway bridge, 1½ miles below. Two small ditches of not to exceed 6 cubic feet per second capacity divert water between gage and bridge.

Regulation—Flow is regulated to some extent by the La Jara Reservoir.

CONEJOS RIVER NEAR MOGOTE

Location—At highway bridge about 5 miles above Mogote From September 1, 1899, to March 31, 1900, and from April 17, 1903, to October 31, 1905, a station was maintained about 4 miles above Mogote. From March 21, 1907, to October 5, 1911, a station was maintained at Jacob's Ranch, 8 miles above Mogote.

Records Available—January 1, 1912, to September 30, 1922.

Drainage Area—282 square miles.

Gage—An automatic recording gage.

Channel—Shifts some at left side.

Discharge Measurements—Made from bridge at high stages and by wading 75 feet to 150 feet below at low stages.

Winter Flow—Ice causes backwater during the winter months.

Diversions—There are court decrees for diversions of 3,476 second-feet from Conejos River, all but 66 second-feet being diverted below the present station.

Reservoirs—No reservoirs have been constructed on the Conejos above this station.

CONEJOS RIVER NEAR LA SAUSES

Location—In Sec. 2, T. 35 N., R. 11 E., about two miles above the mouth.

Records Available—March 29, 1921, to September 30, 1922.

Gage—Staff and automatic gages on each of the two channels.

Discharge Measurements—Made by wading at low water and from the two highway bridges during high water.

Accuracy—Good.

LA GARITA CREEK NEAR LA GARITA

Location—In Sec. 10, T. 41 N., R. 6 E. New Mexico Principal Meridian, at Curby's Ranch, 5 miles southwest of La Garita Postoffice.

Drainage Area—61 square miles.

Records Available—April 1, 1919, to September 30, 1922.

Gage—Vertical staff.

Discharge Measurements—Made by wading at all stages.

Accuracy—Results considered good.

CARNERO CREEK NEAR LA GARITA

Location—In Sec. 26, T. 42 N., R. 6 E. New Mexico Principal Meridian, at Hart's Ranch, 3 miles northwest of La Garita Postoffice.

Drainage Area—117 square miles.

Records Available—April 1, 1919, to September 30, 1922.

Gage—Vertical staff and automatic gages.

Discharge Measurements—Wading at all stages.

Accuracy—Results considered good.

SAGUACHE CREEK NEAR SAGUACHE

Location—At Ward's Ranch below the dam site of the Stark-Hagadorn Irrigation Co., 10 miles above Saguache. Ford Creek, the nearest important tributary, enters some distance below.

Records Available—August 7, 1910, to September 23, 1912; June 1, 1914, to September 30, 1922.

Drainage Area—595 square miles.

Gage—An automatic recording gage.

Channel—Shifting.

Discharge Measurements—Made from footbridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

Diversions—There are court decrees for diversions of 46 second-feet from Saguache Creek above the station, and 365 second-feet below.

SAN LUIS CREEK NEAR VILLA GROVE

Location—In Sec. 8, T. 48 N., R. 10 E., two miles southeast of Villa Grove and below the mouth of Kerber Creek.

Records Available—April 1-September 30, 1922. During 1910, 1911 and 1912, a station was maintained by the state just above the mouth of Kerber Creek.

Gage—Staff gage.

Discharge Measurements—Wading at all stages.

KERBER CREEK NEAR VILLA GROVE

Location—In Sec. 12, T. 46 N., R. 9 E., one mile east of Villa Grove.

Records Available—April 1-September 30, 1922. In 1911 and 1912, a station was maintained seven miles west of this station.

Gage—Staff gage.

Discharge Measurements—Wading at practically all stages.

Discharge of Rio Grande at Thirty Mile Bridge for 1921.

Drainage Area, 163 Square Miles. Altitude, 9,380 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8	8	8	8	230	612	1040	542	291	165	234	....
2	8	8	8	8	230	840	1040	531	291	165	234	....
3	8	8	8	8	204	1130	1020	476	257	165	291	....
4	8	8	8	8	177	1280	1020	350	230	165	360	....
5	8	8	8	8	177	1250	948	336	197	165	162	....
6	8	8	8	8	177	1180	782	336	168	165	12	....
7	8	8	8	42	177	1120	742	278	168	266	10	....
8	8	8	8	162	177	1210	702	336	150	394	10	....
9	8	8	8	162	177	1690	662	336	134	360	10	....
10	8	8	8	162	177	2350	631	336	134	327	10	....
11	8	8	8	162	257	2780	631	336	97	309	10	....
12	8	8	8	162	360	3430	662	360	97	291	10	....
13	8	8	8	162	384	3470	830	542	97	291	10	....
14	8	8	8	194	455	3310	857	520	97	291	10	....
15	8	8	8	230	497	3170	830	497	95	291	10	....
16	8	8	8	230	497	2860	803	470	93	291	10	....
17	8	8	8	230	497	2520	850	450	93	291	10	....
18	8	8	8	142	497	1970	803	434	93	291	10	....
19	8	8	8	75	514	1430	769	434	93	211	10	....
20	8	8	8	75	514	934	769	434	93	211	10	....
21	8	8	8	75	514	837	769	434	93	211	8	....
22	8	8	8	75	514	997	769	434	93	211	8	....
23	8	8	8	131	514	1200	769	434	93	211	8	....
24	8	8	8	204	514	1390	769	434	93	211	8	....
25	8	8	8	204	460	1510	656	434	93	211	8	....
26	8	8	8	204	409	1510	600	434	93	211	8	....
27	8	8	8	204	389	1470	600	434	93	211	8	....
28	8	8	8	204	389	1400	600	384	93	211	8	....
29	8	....	8	204	389	1310	583	336	93	222	8	....
30	8	....	8	204	389	1040	571	336	126	234	8	....
31	8	....	8	....	424	....	571	314	....	234	....	....
Total	248	224	248	3947	11280	51220	23648	12742	3931	7483	1513	248
Mean	8	8	8	132	364	1710	763	411	131	241	50.4	8
Max	....	....	....	230	514	3470	1040	542	291	394	360	....
Min	....	....	....	8	177	612	571	314	93	165	....	....
Acre-ft.	492	444	492	7860	22400	102000	46900	25300	7800	14800	3000	492

Discharge of Rio Grande River at Thirty Mile Bridge for 1922.

Drainage Area, 163 Square Miles. Altitude, 9,380 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	101	92	779	772	261	....	....	....
2	....	....	....	....	101	24	752	772	225	....	....	....
3	....	....	....	....	101	24	746	772	225	....	....	....
4	....	....	....	....	150	24	713	693	193	....	....	....
5	....	....	....	....	181	24	680	599	193	....	....	....
6	....	....	....	....	293	26	655	580	178	....	....	....
7	....	....	....	....	539	28	630	563	178	....	....	....
8	....	....	....	....	706	28	563	539	178	....	....	....
9	....	....	....	....	706	268	511	539	178	....	....	....
10	....	....	....	....	706	973	462	426	178	....	....	....
11	....	....	....	....	706	1560	468	309	152	....	....	....
12	....	....	....	....	706	1750	674	301	152	....	....	....
13	....	....	....	....	706	1900	890	301	152	....	....	....
14	....	....	....	....	706	1850	882	301	152	....	....	....
15	....	....	....	....	706	1820	840	301	152	....	....	....
16	....	....	....	....	706	1750	840	301	152	....	....	....
17	....	....	....	....	706	1690	840	288	117	....	....	....
18	....	....	....	....	706	1650	840	280	117	....	....	....
19	....	....	....	....	706	1610	840	280	97	....	....	....
20	....	....	....	....	630	1610	806	280	97	....	....	....
21	....	....	....	....	557	1590	840	280	54	....	....	....
22	....	....	....	....	557	1510	840	280	54	....	....	....
23	....	....	....	....	557	1430	840	288	54	....	....	....
24	....	....	....	....	557	1310	806	301	54	....	....	....
25	....	....	....	....	648	1310	806	301	54	....	....	....
26	....	....	....	....	772	1230	806	301	54	....	....	....
27	....	....	....	....	959	1020	840	301	54	....	....	....
28	....	....	....	....	1120	875	826	261	54	....	....	....
29	....	....	....	....	1120	840	806	261	54	....	....	....
30	....	....	....	....	1120	806	786	261	54	....	....	....
31	....	....	....	....	1120	....	772	261	....	....	....	....
Total	....	....	....	....	19655	30622	23379	12293	3867	....	....	....
Mean	....	....	....	....	634	1020	754	397	129	....	....	....
Max	....	....	....	....	1120	1900	890	772	261	....	....	....
Min	....	....	....	....	101	24	462	261	54	....	....	....
Acre-ft.	....	....	....	....	39000	60700	46400	24400	7680	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River at Wason for 1921.

Drainage Area, 700 Square Miles. Altitude, 8,591 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	150	130	160	251	968	3260	2700	1430	935	499	484	195
2	150	130	170	312	1380	3230	2720	1290	892	530	543	190
3	150	130	170	327	1630	3790	2760	1220	839	530	608	120
4	150	130	190	400	1900	4040	2800	1100	785	518	543	120
5	155	130	190	327	2070	3660	2450	985	778	513	337	140
6	155	135	198	255	2120	3320	2300	919	676	501	291	140
7	155	135	198	243	1680	3320	2120	902	662	550	232	130
8	155	135	168	291	1380	3760	1950	902	648	580	212	120
9	150	135	142	405	1190	4850	1780	902	601	610	198	120
10	150	140	142	466	1140	6390	1650	919	581	630	208	140
11	145	140	155	549	1190	7240	1630	919	556	610	208	150
12	145	140	155	543	1480	7820	1630	919	513	600	205	160
13	145	140	174	495	1680	8340	1750	1100	499	590	205	170
14	145	140	177	495	1900	8080	1900	1240	466	570	205	150
15	145	140	183	530	2020	7570	1950	1240	466	550	205	145
16	140	140	177	530	2180	6920	2090	1170	499	540	205	140
17	140	140	201	513	2070	6600	2070	1100	478	530	190	135
18	140	140	243	543	2070	5650	2070	1050	518	510	160	140
19	140	150	283	556	1900	4770	1870	1080	557	501	200	140
20	140	150	251	427	1740	3580	1880	1150	478	501	230	142
21	140	150	232	416	1800	3130	1860	1270	433	472	210	160
22	145	150	232	416	1740	3000	1880	1450	433	472	190	150
23	140	155	251	507	1500	3130	1860	1500	444	472	195	140
24	135	155	215	608	2200	3300	1880	1720	455	472	200	160
25	135	155	251	771	2120	3350	1720	1610	450	472	210	160
26	135	160	251	734	2020	3340	1710	1460	444	466	210	160
27	135	160	215	669	2020	3270	1580	1330	438	472	210	160
28	135	160	215	635	2310	3100	1580	1270	416	501	210	160
29	135	....	215	684	2600	2900	1560	1170	405	484	205	160
30	135	....	215	771	3100	2800	1560	1090	416	472	200	160
31	130	....	215	....	3230	....	1480	1050	....	501	....	160
Total	4445	3995	6234	14669	58358	137510	60740	36457	16761	16219	7709	4617
Mean	143	143	201	489	1880	4580	1960	1180	559	523	257	149
Max	....	....	283	771	3230	8340	2800	1720	935	630	....	....
Min	....	....	142	243	968	2800	1480	902	405	466	....	....
Acreft.	8790	7940	12400	29100	116000	273000	121000	72600	33300	32200	15300	9160

Discharge of Rio Grande River at Wason for 1922.

Drainage Area, 700 Square Miles. Altitude, 8,591 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	1010	2890	1760	1410	607	....	....	....
2	....	....	....	....	1050	1750	1580	1270	642	....	....	....
3	....	....	....	....	1190	1640	1460	1220	590	....	....	....
4	....	....	....	....	1380	1870	1480	1210	585	....	....	....
5	....	....	....	....	1580	2090	1310	1300	500	....	....	....
6	....	....	....	....	2370	2060	1240	1240	476	....	....	....
7	....	....	....	....	2550	2270	1160	1220	455	....	....	....
8	....	....	....	....	2250	2800	1090	1170	455	....	....	....
9	....	....	....	....	2190	2740	1040	1150	460	....	....	....
10	....	....	....	....	1760	2780	930	1100	445	....	....	....
11	....	....	....	....	1560	3390	890	988	435	....	....	....
12	....	....	....	....	1460	3950	866	938	440	....	....	....
13	....	....	....	....	1400	3900	988	890	565	....	....	....
14	....	....	....	....	1450	4310	1240	1130	579	....	....	....
15	....	....	....	....	1580	3750	1210	1170	579	....	....	....
16	....	....	....	....	1530	3560	1190	1050	550	....	....	....
17	....	....	....	....	1730	3450	1280	1010	535	....	....	....
18	....	....	....	....	2190	3470	1280	970	520	....	....	....
19	....	....	....	....	2460	3400	1330	970	420	....	....	....
20	....	....	....	....	2510	3310	1350	906	350	....	....	....
21	....	....	....	....	2710	3150	1430	803	275	....	....	....
22	....	....	....	....	2610	3050	1440	850	259	....	....	....
23	....	....	....	....	3050	2990	1440	775	262	....	....	....
24	....	....	....	....	3260	2810	1420	719	251	....	....	....
25	....	....	....	494	3480	2600	1400	670	251	....	....	....
26	....	....	....	649	3810	2370	1440	726	262	....	....	....
27	....	....	....	579	4070	2210	1480	720	262	....	....	....
28	....	....	....	691	4270	1910	1460	725	262	....	....	....
29	....	....	....	733	4290	1850	1460	670	262	....	....	....
30	....	....	....	850	4350	1800	1490	630	262	....	....	....
31	....	....	....	....	3990	....	1460	630	....	....	....	....
Total	....	....	....	3996	75090	84120	40594	30230	12796	....	....	....
Mean	....	....	....	666	2420	2800	1310	975	426	....	....	....
Max	....	....	....	....	4350	4310	1760	1410	642	....	....	....
Min	....	....	....	....	1010	1800	866	630	262	....	....	....
Acre-ft.	....	....	....	7920	149000	167000	80600	60000	25300	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande River at Del Norte for 1921.

Drainage Area, 1,400 Square Miles. Altitude, 7,868 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	270	215	350	430	1620	5210	3620	1780	1500	546	592	310
2	270	220	375	490	2080	5280	3590	1680	1460	627	620	310
3	270	220	375	585	2090	5630	3420	1630	1330	627	655	306
4	285	225	400	655	2880	5940	3460	1540	1250	627	719	210
5	285	230	400	585	3180	5790	3260	1430	1200	655	687	210
6	285	235	400	460	3320	5280	2720	1350	1080	627	585	240
7	285	215	400	430	2800	5050	2530	1290	1000	711	442	240
8	285	215	350	400	2350	5940	2410	1340	995	825	385	220
9	270	220	350	552	2090	6880	2280	1300	935	906	350	210
10	275	225	290	585	1910	8250	2260	1340	879	888	330	230
11	265	225	290	655	1940	8930	2160	1350	879	834	326	250
12	255	225	310	843	2340	9380	2100	1310	789	816	350	260
13	260	230	370	735	2690	9630	2160	1330	719	789	350	270
14	250	230	375	780	1500	9380	2770	1560	719	780	360	280
15	240	225	380	695	3040	9290	2610	1620	687	771	350	260
16	240	225	400	620	3330	9010	2670	1570	719	743	338	260
17	240	220	436	695	3180	8440	2580	1460	695	735	342	250
18	240	225	454	695	3080	7440	2610	1360	711	727	270	240
19	240	240	514	727	2950	6260	2520	1480	834	671	238	240
20	235	240	460	671	2640	5120	2410	2300	807	655	290	250
21	235	260	430	671	2660	4500	2400	1680	744	648	365	255
22	240	260	460	695	2670	4310	2470	1820	719	663	306	270
23	245	300	520	915	2930	4650	2400	2010	703	641	294	250
24	250	300	430	1130	3490	4740	2480	2160	671	627	290	240
25	230	300	490	1040	3420	4780	2350	2150	671	627	314	250
26	235	320	490	906	3350	4760	2380	2030	648	648	306	260
27	235	330	430	834	3480	4670	2280	1840	599	606	322	260
28	230	350	400	843	4090	4460	2240	1730	585	613	326	260
29	235	....	400	1020	4460	4310	2010	1580	565	599	318	260
30	230	....	430	1330	5070	3890	1890	1500	546	627	310	260
31	215	....	400	....	5330	....	1810	1480	....	606	....	260
Total	7825	6925	12559	21672	91960	187200	78850	50000	25639	21465	11730	7871
Mean	252	247	405	722	2970	6240	2540	1610	855	692	391	254
Max	....	....	520	1330	5330	9630	3620	2160	1500	906	719	....
Min	....	....	290	400	1500	3890	1810	1290	546	546	238	....
Acreft.	15500	13700	24900	43000	183000	371000	156000	99000	50900	42600	23300	15600

Discharge of Rio Grande River at Del Norte for 1922.

Drainage Acre, 700 Square Miles. Altitude, 8,591 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	260	280	300	380	2140	5980	3060	1820	817	....	....	....
2	260	280	280	400	2200	4370	2990	1680	862	....	....	....
3	260	280	260	420	2200	4000	2660	1620	799	....	....	....
4	260	260	250	470	2530	4150	2460	1740	763	....	....	....
5	260	260	250	544	3170	4420	2370	1740	692	....	....	....
6	260	260	260	466	4280	4770	2230	1640	670	....	....	....
7	260	260	260	450	4650	4980	2100	1620	632	....	....	....
8	260	260	260	456	4300	5720	1910	1540	632	....	....	....
9	260	280	260	420	3930	5460	1870	1510	624	....	....	....
10	260	280	266	386	3220	5770	1760	1450	604	....	....	....
11	260	280	260	420	2930	6200	1570	1300	583	....	....	....
12	260	280	260	386	2400	6550	1480	1240	556	....	....	....
13	240	280	270	386	2380	6580	1430	1170	632	....	....	....
14	240	280	270	429	2430	7230	1600	1480	685	....	....	....
15	260	280	270	396	2710	6390	1630	1620	604	....	....	....
16	260	280	280	386	2710	5900	1630	1500	570	....	....	....
17	260	280	280	415	3000	5620	1680	1450	544	....	....	....
18	260	280	290	424	3930	5510	1730	1310	533	....	....	....
19	260	260	300	405	4310	5460	1750	1360	515	....	....	....
20	260	260	300	420	4560	5240	1770	1300	493	....	....	....
21	260	260	310	590	5160	5130	1750	1250	456	....	....	....
22	260	260	320	826	4780	5240	1760	1190	415	....	....	....
23	260	260	329	1140	5380	5330	1790	1200	396	....	....	....
24	260	260	330	1140	5980	4960	1770	1040	391	....	....	....
25	260	280	330	1070	6860	4370	1770	1000	396	....	....	....
26	260	280	340	1180	7230	4080	1820	970	396	....	....	....
27	260	300	340	1220	7410	3930	1910	961	424	....	....	....
28	260	303	350	1240	7840	3550	1900	970	415	....	....	....
29	260	....	350	1480	8000	3350	1960	898	386	....	....	....
30	260	....	360	1720	8000	3260	2000	853	368	....	....	....
31	260	....	360	....	7290	....	1960	853	....	....	....	....
Total	8020	7663	9145	20065	137910	153500	60070	41275	16853	....	....	....
Mean	259	274	295	6690	4450	5120	1940	1330	562	....	....	....
Max	....	....	....	1720	8000	7230	3060	1820	817	....	....	....
Min	....	....	....	380	2140	3260	1430	853	368	....	....	....
Acre-ft.	15900	15200	18100	39800	274000	305000	119000	81800	33400	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande at Alamosa for 1921.
Altitude, 7,536 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	225	220	496	227	154	2380	2610	712	1160	254	344	313
2	225	220	515	203	254	2320	2220	664	1130	254	344	313
3	225	230	515	203	443	2270	1820	574	1020	254	344	328
4	235	230	534	203	574	2550	1590	496	930	268	360	283
5	245	240	534	192	760	3230	1590	426	870	268	426	254
6	255	245	478	182	960	4180	1500	392	785	268	460	268
7	255	250	478	172	1100	4620	1380	496	688	254	426	298
8	255	230	478	172	810	4840	1300	574	596	268	376	300
9	255	230	496	146	574	4920	990	712	554	283	344	270
10	245	240	515	146	443	5400	900	268	515	343	313	240
11	260	245	554	138	344	6040	870	268	478	360	298	270
12	250	245	554	124	298	6500	810	254	460	360	313	310
13	275	250	515	118	313	7200	600	214	409	360	344	330
14	265	255	478	112	443	8000	450	227	376	360	344	320
15	260	255	443	118	515	9000	550	254	376	376	344	330
16	250	255	443	203	618	9500	550	313	376	376	360	370
17	250	260	460	478	736	9800	550	344	328	360	360	210
18	250	260	478	554	712	10000	600	328	298	376	360	260
19	250	260	496	554	641	9200	550	313	283	360	376	320
20	250	280	496	376	618	8800	550	328	283	344	376	370
21	240	280	496	268	515	8200	554	400	283	344	376	376
22	240	280	478	203	478	7000	574	600	298	328	376	380
23	250	280	478	163	496	5800	574	750	298	313	360	300
24	260	300	478	138	574	4700	664	900	283	283	328	250
25	270	320	460	203	840	4200	712	1050	283	254	328	300
26	240	330	460	214	960	3800	760	1200	283	240	328	340
27	250	350	460	172	990	3700	870	1400	283	227	328	350
28	250	375	426	138	960	3500	930	1650	268	227	298	350
29	240	....	376	138	1270	3300	1020	1420	254	254	283	350
30	250	....	298	131	1640	3000	810	1300	254	283	298	350
31	240	....	240	....	2110	....	736	1200	....	313	....	350
Total	7950	7415	14606	6389	22143	167950	30184	20027	14702	9413	10515	9553
Mean	256	265	471	213	714	5600	974	646	490	304	350	308
Max	....	....	554	554	2110	10000	2610	1650	1160	376	460	....
Min	....	....	240	112	154	270	450	214	254	227	283	....
Acre-ft.	15700	14700	29000	12700	43900	333000	59900	39700	29200	18700	20800	18900

Discharge of Rio Grande at Alamosa for 1922.
Altitude, 7,536 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	350	318	300	386	155	3870	1170	32	22	....	....	....
2	350	354	300	386	219	3380	1160	32	22	....	....	....
3	350	354	300	394	282	1900	1120	31	22	....	....	....
4	350	354	310	401	574	1280	1000	30	22	....	....	....
5	350	314	310	426	606	1350	960	31	22	....	....	....
6	350	314	310	464	716	1640	930	30	20	....	....	....
7	350	314	318	448	1450	1720	948	28	20	....	....	....
8	350	311	322	397	1950	1810	627	28	22	....	....	....
9	350	311	325	318	1950	1570	532	27	22	....	....	....
10	350	347	329	264	1830	1320	445	22	22	....	....	....
11	350	311	325	240	1030	1540	366	24	22	....	....	....
12	347	343	325	264	1260	1780	300	27	22	....	....	....
13	347	340	325	150	1030	3130	235	22	22	....	....	....
14	304	304	322	176	766	3200	174	22	19	....	....	....
15	300	304	329	150	716	3340	125	27	19	....	....	....
16	336	340	322	124	620	3370	114	34	19	....	....	....
17	336	300	329	124	644	2900	63	42	19	....	....	....
18	336	336	336	124	668	2720	22	44	19	....	....	....
19	332	336	296	124	1090	2610	22	38	16	....	....	....
20	332	300	300	124	1380	2550	19	33	16	....	....	....
21	330	300	293	117	1680	2310	14	32	16	....	....	....
22	330	300	304	100	2070	2220	9	30	16	....	....	....
23	330	300	325	98	2070	2000	12	29	16	....	....	....
24	330	296	350	124	2150	2490	28	30	16	....	....	....
25	330	296	358	119	2410	2100	38	29	16	....	....	....
26	320	300	368	119	2870	1930	33	27	16	....	....	....
27	320	300	386	105	2990	1650	33	26	14	....	....	....
28	320	300	408	102	3330	1460	12	24	14	....	....	....
29	320	....	408	107	3750	1260	29	22	14	....	....	....
30	320	....	390	124	3930	1170	32	22	14	....	....	....
31	320	....	390	....	3920	....	32	22	....	....	....	....
Total	10390	8896	10313	6599	50106	65570	10604	897	561	....	....	....
Mean	335	318	333	220	1620	2190	342	28.9	18.7	....	....	....
Max	350	354	408	464	3930	3870	1170	44	22	....	....	....
Min	300	296	293	98	155	1170	9	22	14	....	....	....
Acre-ft.	20600	17700	20500	13100	99600	130000	21000	1780	1110	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rio Grande at Lobatos for 1921.

Drainage Area, 7,700 Square Miles. Altitude, 7,440 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	440	450	810	470	340	3680	2520	1110	1590	435	478	486
2	440	375	855	435	463	3680	2000	990	1540	435	486	518
3	440	375	1000	400	729	3500	1560	950	1450	414	502	526
4	440	400	1060	400	1190	3660	1330	891	1340	400	510	340
5	440	380	1110	340	1700	4330	1270	810	1110	400	518	225
6	470	430	1110	280	2210	4810	1190	729	1060	400	590	400
7	470	440	1110	255	2580	5210	1150	648	950	388	630	352
8	440	470	1060	255	2360	5530	1060	566	855	388	630	340
9	470	360	900	255	1860	6300	920	478	765	388	566	320
10	470	360	810	240	1410	6870	783	428	675	421	518	310
11	550	360	765	250	1110	7400	657	394	630	486	486	360
12	495	450	675	260	940	8050	358	382	590	502	470	470
13	455	500	720	260	810	8860	502	364	550	510	478	480
14	580	430	810	265	990	10300	421	364	502	518	494	485
15	570	430	810	265	1230	11500	388	382	478	518	502	485
16	560	400	765	235	1310	12200	382	394	494	526	518	390
17	530	450	765	328	1550	11800	502	442	486	510	558	370
18	520	550	765	720	1560	11300	582	502	463	502	566	470
19	530	450	810	819	1480	10500	582	534	456	494	574	487
20	550	480	810	801	1310	9220	566	534	400	502	510	500
21	540	525	855	648	1230	8240	574	657	407	502	590	500
22	450	600	855	494	1030	7020	606	1060	428	478	558	500
23	440	600	810	456	1030	5790	622	1680	456	463	574	500
24	500	600	810	435	1130	4720	765	1970	463	470	550	420
25	530	600	810	502	1270	4160	774	2200	456	442	534	440
26	580	600	810	542	1700	3870	960	2270	463	407	526	490
27	480	720	810	526	1860	3700	1000	2280	456	388	510	500
28	540	675	810	421	1890	3540	1170	2220	449	388	494	500
29	540	....	765	358	2250	3300	1300	2070	428	394	470	450
30	490	....	630	328	2840	2980	1290	1920	421	407	449	450
31	550	....	550	....	3380	....	1160	1700	....	456	....	450
Total	15500	13460	26035	12243	46742	196020	28944	31919	20811	13932	15839	13514
Mean	500	481	840	408	1510	6530	934	1030	694	449	528	436
Max	....	....	1110	819	3380	12200	2520	2280	1590	526	630	....
Min.	....	....	550	240	340	2980	358	364	400	388	449	....
Acre-ft.	30700	26700	51600	24300	92800	389000	57400	63300	41300	27600	31400	26800

Discharge of Rio Grande at Lobatos for 1922.

Drainage Area, 7,700 Square Miles. Altitude, 7,440 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	500	470	480	563	516	7220	1980	95	89	....	....	....
2	508	470	470	546	940	6780	2020	96	89	....	....	....
3	500	460	460	571	1370	5660	1930	98	91	....	....	....
4	500	460	470	571	1600	4420	1770	95	89	....	....	....
5	500	470	470	588	1710	3650	1590	91	87	....	....	....
6	500	470	470	613	2050	3950	1570	89	84	....	....	....
7	500	480	480	648	2850	4250	1410	91	84	....	....	....
8	500	480	480	666	3730	4480	1270	93	82	....	....	....
9	490	490	480	622	4220	4800	1220	89	81	....	....	....
10	490	500	500	531	3950	5160	880	89	79	....	....	....
11	490	510	500	478	2910	5280	765	91	78	....	....	....
12	490	520	500	463	2220	5250	588	91	79	....	....	....
13	490	530	500	470	1690	5300	463	89	81	....	....	....
14	480	540	531	463	1350	5250	368	96	78	....	....	....
15	480	550	516	414	1230	5250	297	95	78	....	....	....
16	480	550	531	362	1290	5210	270	89	76	....	....	....
17	480	550	546	270	1360	5080	270	91	76	....	....	....
18	470	550	563	230	1590	4760	230	110	76	....	....	....
19	470	550	563	222	2160	4310	226	119	75	....	....	....
20	470	550	546	245	2290	4120	210	110	76	....	....	....
21	460	550	546	240	3490	3920	183	102	75	....	....	....
22	460	550	554	240	4050	3650	161	96	75	....	....	....
23	460	550	571	245	4250	3330	142	95	75	....	....	....
24	460	550	613	250	4630	3140	130	95	79	....	....	....
25	460	600	605	291	4830	3120	124	95	84	....	....	....
26	470	540	605	308	5350	3250	114	95	86	....	....	....
27	470	500	613	421	5640	2850	110	98	91	....	....	....
28	470	490	605	414	6130	2470	105	91	91	....	....	....
29	470	....	639	456	6420	2200	100	93	91	....	....	....
30	470	....	622	478	6700	2000	96	93	91	....	....	....
31	470	....	588	....	6980	....	93	91	....	....	....	....
Total	14908	14480	16617	12879	99496	130110	20685	2951	2466	....	....	....
Mean	481	517	536	429	3210	4340	667	95.2	82.2	....	....	....
Max	....	....	639	666	6980	7220	2020	119	91	....	....	....
Min.	....	....	....	222	516	2000	93	89	75	....	....	....
Acre-ft.	29600	28700	33000	25500	197000	258000	41000	5850	4890	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of South Fork Rio Grande at South Fork for 1921.
Drainage Area, 216 Square Miles. Altitude, 8,176 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	48	40	80	122	385	1270	598	213	187	45	45	....
2	48	40	85	122	469	1230	598	213	163	50	40	....
3	48	40	90	142	540	1240	548	187	152	45	40	....
4	50	40	95	164	674	1280	650	175	140	40	40	....
5	50	42	100	132	732	1160	524	163	118	45	40	....
6	50	42	110	113	702	1160	433	175	118	62	40	....
7	50	40	120	113	540	1210	317	163	118	103	40	....
8	50	40	130	96	425	1370	300	152	118	56	37	....
9	48	42	142	96	385	1510	300	140	118	50	37	....
10	50	42	70	104	366	1650	285	129	108	50	37	....
11	45	42	100	132	332	1910	285	118	98	56	37	....
12	40	42	130	153	385	2060	300	118	89	50	34	....
13	45	45	150	142	446	1920	300	118	89	50	37	....
14	40	45	165	153	425	1730	353	152	89	56	37	....
15	40	45	188	122	446	1840	334	163	89	56	37	....
16	40	46	180	96	516	1650	285	163	103	50	32	....
17	40	43	175	104	492	1380	270	163	132	50	30	....
18	40	40	170	96	516	1180	256	163	166	50	34	....
19	40	38	160	132	492	1020	241	163	166	50	37	....
20	38	41	155	153	469	917	227	175	178	45	34	....
21	38	45	150	164	469	820	200	317	178	45	37	....
22	40	48	142	176	516	820	213	270	166	50	40	....
23	42	50	120	268	540	852	241	256	143	45	32	....
24	45	55	100	253	702	884	256	334	132	40	30	....
25	42	60	90	212	762	852	241	300	122	40	32	....
26	45	65	80	176	762	820	285	270	86	37	32	....
27	45	70	70	164	828	732	334	256	62	45	37	....
28	42	75	75	176	985	677	285	241	62	37	37	....
29	45	....	80	268	1140	650	270	227	62	45	32	....
30	42	....	85	300	1260	619	227	227	56	45	30	....
31	40	....	88	....	1340	....	213	200	....	45	....	....
Total	1321	1303	3675	4644	19041	36413	10169	6104	3608	1533	1084	....
Mean	42.6	46.5	119	155	614	1210	328	197	120	49.5	36.1	....
Max	....	....	....	300	1340	2060	650	334	187	103	45	....
Min	....	....	....	96	332	619	200	118	56	37	30	....
Acre-ft.	2620	2580	7320	9220	37800	72000	20200	12100	7140	3040	2150	....

Discharge of South Fork Rio Grande at South Fork for 1922.
Drainage Area, 216 Square Miles. Altitude, 8,176 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	145	574	1280	740	138	62	....	....	....
2	....	....	....	145	624	1280	624	160	66	....	....	....
3	....	....	....	145	676	1180	556	182	62	....	....	....
4	....	....	....	150	850	1090	574	204	59	....	....	....
5	....	....	....	150	920	1180	565	241	50	....	....	....
6	....	....	....	153	920	1340	506	225	49	....	....	....
7	....	....	....	158	1000	1490	469	204	46	....	....	....
8	....	....	....	160	850	1880	429	194	45	....	....	....
9	....	....	....	156	730	2120	392	187	46	....	....	....
10	....	....	....	147	473	2380	359	126	46	....	....	....
11	....	....	....	149	519	2540	325	110	45	....	....	....
12	....	....	....	142	528	2380	296	98	43	....	....	....
13	....	....	....	138	546	2320	271	93	40	....	....	....
14	....	....	....	132	714	2020	254	102	36	....	....	....
15	....	....	....	126	960	1740	238	98	33	....	....	....
16	....	....	....	120	1040	1380	228	98	33	....	....	....
17	....	....	....	118	1180	1280	216	114	33	....	....	....
18	....	....	....	120	1300	1180	209	94	32	....	....	....
19	....	....	....	182	1320	1090	218	120	32	....	....	....
20	....	....	....	252	1380	984	204	98	32	....	....	....
21	....	....	....	254	1440	1280	187	102	32	....	....	....
22	....	....	....	265	1280	1740	173	98	32	....	....	....
23	....	....	....	274	1380	1380	162	89	32	....	....	....
24	....	....	....	285	1610	1180	142	80	32	....	....	....
25	....	....	....	322	1740	1090	138	71	32	....	....	....
26	....	....	....	331	1910	984	134	59	39	....	....	....
27	....	....	....	337	1990	730	126	54	39	....	....	....
28	....	....	....	340	2120	624	122	49	39	....	....	....
29	....	....	....	418	2250	574	118	49	39	....	....	....
30	....	....	....	485	2250	676	122	54	39	....	....	....
31	....	....	....	....	1880	....	126	59	....	....	....	....
Total	....	....	....	6307	36954	42392	9223	3650	1245	....	....	....
Mean	....	....	....	210	1190	1410	297	118	41.5	....	....	....
Max	....	....	....	485	2250	2540	740	241	62	....	....	....
Min	....	....	....	118	473	574	118	49	32	....	....	....
Acre-ft.	....	....	....	12500	73200	83900	18300	7260	2470	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Pinos Creek Near Del Norte for 1921.

Drainage Area, 53 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	10	61	163	68	30	63	16	....	....
2	....	....	....	12	87	165	65	29	58	16	....	....
3	....	....	....	10	99	163	63	29	54	16	....	....
4	....	....	....	12	115	173	61	28	49	15	....	....
5	....	....	....	12	137	168	55	29	44	15	....	....
6	....	....	....	12	128	156	49	30	43	15	....	....
7	....	....	....	15	86	152	48	25	39	15	....	....
8	....	....	....	15	77	161	43	28	38	15	....	....
9	....	....	....	10	61	161	40	29	35	14	....	....
10	....	....	....	12	62	165	39	28	32	14	....	....
11	....	....	....	15	75	173	37	24	31	14	....	....
12	....	....	....	18	84	180	43	26	30	14	....	....
13	....	....	....	15	83	175	38	30	28	14	....	....
14	....	....	....	15	86	175	38	34	25	14	....	....
15	....	....	....	10	89	178	44	30	24	14	....	....
16	....	....	10	24	92	163	39	28	27	14	....	....
17	....	....	10	16	83	147	290	24	25	14	....	....
18	....	....	12	13	83	128	100	31	26	14	....	....
19	....	....	10	18	80	126	60	49	24	14	....	....
20	....	....	10	18	79	119	40	84	23	14	....	....
21	....	....	10	20	95	108	40	80	22	14	....	....
22	....	....	10	22	103	97	40	77	21	13	....	....
23	....	....	10	31	101	97	45	63	21	12	....	....
24	....	....	10	39	110	95	50	61	19	11	....	....
25	....	....	10	34	121	95	60	57	20	11	....	....
26	....	....	10	24	121	87	55	55	18	10	....	....
27	....	....	10	25	139	79	50	60	17	14	....	....
28	....	....	10	24	173	77	40	56	16	14	....	....
29	....	....	10	27	183	75	30	57	16	13	....	....
30	....	....	8	35	180	70	30	76	16	12	....	....
31	....	....	10	....	175	....	30	63	....	10	....	....
Total	....	....	160	563	3248	4071	1730	1350	904	425	....	....
Mean	....	....	10	18.8	105	136	55.8	43.5	30.1	13.7	....	....
Max	....	....	....	39	183	180	290	84	63	16	....	....
Min	....	....	....	10	61	70	30	24	16	10	....	....
Acre-ft.	....	....	317	1120	6460	8090	3430	2670	1790	842	....	....

Discharge of Pinos Creek Near Del Norte for 1922

Drainage Area, 53 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	17	105	230	85	26	11	....	....	....
2	....	....	....	17	131	200	87	23	12	....	....	....
3	....	....	....	17	134	2400	82	18	14	....	....	....
4	....	....	....	17	156	366	78	16	11	....	....	....
5	....	....	....	17	200	362	70	16	11	....	....	....
6	....	....	....	19	237	354	78	16	10	....	....	....
7	....	....	....	16	250	346	65	16	10	....	....	....
8	....	....	....	18	237	342	52	16	10	....	....	....
9	....	....	....	18	174	335	44	16	10	....	....	....
10	....	....	....	18	147	332	38	16	10	....	....	....
11	....	....	....	17	113	324	36	16	10	....	....	....
12	....	....	....	16	70	317	35	16	10	....	....	....
13	....	....	....	16	78	314	33	16	10	....	....	....
14	....	....	....	16	102	314	32	19	10	....	....	....
15	....	....	....	16	115	257	30	97	9	....	....	....
16	....	....	....	16	128	240	30	23	9	....	....	....
17	....	....	....	21	165	230	32	19	9	....	....	....
18	....	....	....	25	220	216	33	18	9	....	....	....
19	....	....	....	18	243	213	29	17	9	....	....	....
20	....	....	....	18	264	206	29	15	9	....	....	....
21	....	....	....	26	267	200	28	15	8	....	....	....
22	....	....	....	36	299	184	26	14	8	....	....	....
23	....	....	....	40	306	190	24	12	8	....	....	....
24	....	....	....	40	317	206	23	12	8	....	....	....
25	....	....	....	41	366	174	23	12	10	....	....	....
26	....	....	....	41	354	147	24	12	10	....	....	....
27	....	....	....	40	362	134	25	13	10	....	....	....
28	....	....	....	40	358	110	25	12	9	....	....	....
29	....	....	....	47	317	105	63	12	9	....	....	....
30	....	....	....	68	321	95	20	12	8	....	....	....
31	....	....	....	....	299	....	30	12	....	....	....	....
Total	....	....	....	772	6835	9443	1309	573	291	....	....	....
Mean	....	....	....	25.7	220	315	42.2	18.5	9.7	....	....	....
Max	....	....	....	68	366	2400	87	97	14	....	....	....
Min	....	....	....	....	70	95	20	11	8	....	....	....
Acre-ft.	....	....	....	1530	13500	18700	2590	1140	577	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Rock Creek Near Monte Vista for 1921.

Drainage Area, 38 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	4.3	14	35	14	9.4	14	3.0	....	....
2	....	....	....	4.3	24	35	14	9.4	14	3.0	....	....
3	....	....	....	4.3	27	31	14	12	12	3.0	....	....
4	....	....	....	4.3	39	39	14	12	12	3.0	....	....
5	....	....	....	4.3	39	35	12	12	12	3.0	....	....
6	....	....	....	5.6	43	35	12	9.4	12	3.0	....	....
7	....	....	....	5.6	35	35	12	9.4	12	3.0	....	....
8	....	....	....	5.6	27	39	12	9.4	9.4	3.0	....	....
9	....	....	....	9.4	24	43	9.4	9.4	9.4	3.0	....	....
10	....	....	....	7.5	24	43	12	9.4	9.4	3.0	....	....
11	....	....	....	7.5	24	43	9.4	9.4	9.4	3.0	....	....
12	....	....	....	7.5	24	43	12	9.4	7.5	3.0	....	....
13	....	....	....	9.4	27	43	12	9.4	12	3.0	....	....
14	....	....	....	9.4	27	43	9.4	14	7.5	3.0	....	....
15	....	....	....	3.0	27	43	12	9.4	4.3	3.0	....	....
16	....	....	....	5.6	27	39	12	9.4	4.3	3.0	....	....
17	....	....	....	12	27	35	12	9.4	4.3	3.0	....	....
18	....	....	....	9.4	24	35	14	14	5.6	3.0	....	....
19	....	....	....	5.6	24	31	14	14	4.3	2.3	....	....
20	....	....	....	5.6	24	31	9.4	24	4.3	2.3	....	....
21	....	....	....	9.4	24	27	9.4	24	4.3	2.3	....	....
22	....	....	....	9.4	24	27	12	24	4.3	2.3	....	....
23	....	....	....	12	27	24	14	20	3.0	2.3	....	....
24	....	....	....	12	27	24	17	20	3.0	2.3	....	....
25	....	....	....	9.4	31	24	12	20	3.0	3.0	....	....
26	....	....	....	5.6	31	24	20	20	3.0	2.3	....	....
27	....	....	....	7.5	35	20	14	17	3.0	1.6	....	....
28	....	....	....	5.6	39	20	14	14	3.0	1.6	....	....
29	....	....	....	14	39	20	14	14	3.0	1.6	....	....
30	....	....	....	14	35	17	14	14	3.0	1.6	....	....
31	....	....	....	....	35	....	12	14	....	1.6	....	....
Total	....	....	....	229.1	898	983	394	425 2	212 3	81 1	....	....
Mean..	....	....	....	7.64	29	32.8	12.7	13.7	7.08	2.62	....	....
Max....	....	....	....	14	43	43	20	24	14	3	....	....
Min.....	....	....	....	3	14	17	9.4	9.4	3	1.6	....	....
Acre-ft	....	....	....	455	1780	1950	780	842	421	161	....	....

Discharge of Rock Creek Near Monte Vista for 1922.

Drainage Area, 38 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	3.8	34	52	32	25	7.5	....	....	....
2	....	....	....	3.8	37	52	29	17	7.5	....	....	....
3	....	....	....	3.8	37	48	27	15	7.5	....	....	....
4	....	....	....	3.8	37	44	26	14	7.5	....	....	....
5	....	....	....	3.8	42	44	27	13	7.5	....	....	....
6	....	....	....	3.4	56	44	26	12	7.5	....	....	....
7	....	....	....	3.2	56	44	25	12	7.5	....	....	....
8	....	....	....	4.6	57	47	22	12	7.5	....	....	....
9	....	....	....	3.6	47	48	19	12	7.5	....	....	....
10	....	....	....	4.0	37	48	18	12	6.7	....	....	....
11	....	....	....	4.0	32	45	16	14	6.1	....	....	....
12	....	....	....	4.0	28	44	15	13	6.1	....	....	....
13	....	....	....	4.0	28	48	15	12	6.1	....	....	....
14	....	....	....	5.0	32	48	15	13	6.1	....	....	....
15	....	....	....	6.0	32	44	15	15	6.1	....	....	....
16	....	....	....	6.0	35	40	15	13	6.4	....	....	....
17	....	....	....	6.0	41	41	15	13	6.4	....	....	....
18	....	....	....	7.0	47	43	15	13	6.4	....	....	....
19	....	....	....	8.0	51	40	14	13	6.7	....	....	....
20	....	....	....	10.0	63	39	13	12	6.4	....	....	....
21	....	....	....	10.0	69	39	11	13	6.1	....	....	....
22	....	....	....	12.0	66	39	10	12	5.8	....	....	....
23	....	....	....	13.0	68	42	10.0	10	5.8	....	....	....
24	....	....	....	15.0	74	40	9.5	9.5	5.8	....	....	....
25	....	....	....	17.0	75	31	7.0	8.0	5.8	....	....	....
26	....	....	....	16.0	76	32	6.4	8.5	6.1	....	....	....
27	....	....	....	17.0	69	31	6.4	10.0	6.1	....	....	....
28	....	....	....	21.0	66	32	7.0	10.0	5.8	....	....	....
29	....	....	....	22.0	63	29	11.0	9.0	5.8	....	....	....
30	....	....	....	24.0	63	26	28.0	8.5	5.8	....	....	....
31	....	....	....	....	62	....	18.0	8.5	......	....	....	....
Total	....	....	....	264.8	1580	1244	523.3	382.0	195.9	....	....	....
Mean..	....	....	....	8.83	51.0	41.5	16.9	12.3	6.53	....	....	....
Max....	....	....	....	24.0	76	52	32	25	7.5	....	....	....
Min.....	....	....	....	3.2	28	26	6.4	8.0	5.8	....	....	....
Acre-ft.	....	....	....	525	3140	2470	1040	756	389	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Alamosa River Below Terrace Reservoir for 1922.
Drainage Area, 120 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	45	205	666	411	208	99	....	....	....
2	....	....	....	45	226	578	287	205	79	....	....	....
3	....	....	....	45	281	522	300	92	29	....	....	....
4	....	....	....	44	313	382	303	94	72	....	....	....
5	....	....	....	47	329	411	368	138	67	....	....	....
6	....	....	....	45	329	486	251	30	70	....	....	....
7	....	....	....	48	278	616	254	99	72	....	....	....
8	....	....	....	48	379	732	284	113	72	....	....	....
9	....	....	....	48	407	846	167	121	70	....	....	....
10	....	....	....	51	434	846	306	117	28	....	....	....
11	....	....	....	51	438	851	310	121	67	....	....	....
12	....	....	....	51	434	798	434	131	67	....	....	....
13	....	....	....	52	351	710	246	38	65	....	....	....
14	....	....	....	52	272	637	229	148	67	....	....	....
15	....	....	....	52	355	612	192	164	65	....	....	....
16	....	....	....	52	393	688	44	167	52	....	....	....
17	....	....	....	51	400	693	164	150	27	....	....	....
18	....	....	....	50	407	538	162	145	27	....	....	....
19	....	....	....	48	450	680	174	119	47	....	....	....
20	....	....	....	52	490	693	190	51	53	....	....	....
21	....	....	....	53	478	684	167	123	55	....	....	....
22	....	....	....	67	603	697	152	99	61	....	....	....
23	....	....	....	127	658	641	30	117	59	....	....	....
24	....	....	....	187	658	570	162	117	59	....	....	....
25	....	....	....	218	684	411	141	101	57	....	....	....
26	....	....	....	218	728	570	136	119	57	....	....	....
27	....	....	....	234	654	574	145	42	47	....	....	....
28	....	....	....	205	570	574	143	119	31	....	....	....
29	....	....	....	167	697	570	136	117	26	....	....	....
30	....	....	....	162	741	530	33	105	25	....	....	....
31	....	....	....	....	741	....	223	103	....	....	....	....
Total	....	....	....	2615	14383	18806	6544	3613	1672	....	....	....
Mean	....	....	....	87.2	464	627	211	117	55.7	....	....	....
Max	....	....	....	234	741	798	411	208	99	....	....	....
Min.	....	....	....	....	205	411	30	30	25	....	....	....
Acre-ft.	....	....	....	5190	28500	37300	13000	7190	3310	....	....	....

Discharge of La Jara River Near Capulin for 1921.
Drainage Area, 73 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	54	37	11	11	14	14	....	....
2	....	....	....	....	90	37	11	11	11	14	....	....
3	....	....	....	....	98	37	11	11	11	14	....	....
4	....	....	....	....	98	37	30	11	11	14	....	....
5	....	....	....	....	98	32	28	11	11	14	....	....
6	....	....	....	....	107	22	26	11	9	14	....	....
7	....	....	....	....	98	18	22	11	9	14	....	....
8	....	....	....	37	98	27	18	11	9	14	....	....
9	....	....	....	32	98	27	18	11	9	14	....	....
10	....	....	....	32	90	22	18	11	9	14	....	....
11	....	....	....	37	107	22	18	14	9	18	....	....
12	....	....	....	37	126	22	18	14	9	18	....	....
13	....	....	....	37	136	22	22	11	9	18	....	....
14	....	....	....	37	136	22	18	11	9	18	....	....
15	....	....	....	32	126	22	18	11	9	18	....	....
16	....	....	....	42	126	22	16	11	9	18	....	....
17	....	....	....	37	116	18	16	11	9	14	....	....
18	....	....	....	37	54	18	16	11	9	14	....	....
19	....	....	....	37	54	18	14	14	9	14	....	....
20	....	....	....	37	54	18	14	37	11	14	....	....
21	....	....	....	42	48	18	14	22	11	11	....	....
22	....	....	....	42	48	18	14	18	11	11	....	....
23	....	....	....	48	48	22	18	11	11	11	....	....
24	....	....	....	54	61	22	22	11	11	9	....	....
25	....	....	....	42	54	27	22	11	14	9	....	....
26	....	....	....	42	48	22	22	11	14	9	....	....
27	....	....	....	42	48	14	18	18	14	9	....	....
28	....	....	....	42	42	14	18	18	14	9	....	....
29	....	....	....	42	42	11	18	14	14	9	....	....
30	....	....	....	48	42	11	18	14	14	9	....	....
31	....	....	....	....	42	....	14	11	....	9	....	....
Total	....	....	....	915	2487	679	561	414	309	427	....	....
Mean	....	....	....	39.8	80.2	22.6	18.1	13.4	10.3	13.8	....	....
Max	....	....	....	....	136	37	30	37	14	18	....	....
Min	....	....	....	....	42	11	11	11	9	9	....	....
Acre-ft.	....	....	....	1810	4930	1340	1110	824	613	848	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Jara River near Capulin for 1922.

Drainage Area, 73 Square Miles. Altitude, 8,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	110	50	88	21	31	....	....	....
2	....	....	....	....	136	37	85	18	13	....	....	....
3	....	....	....	....	144	31	85	19	11	....	....	....
4	....	....	....	....	168	27	85	18	10	....	....	....
5	....	....	....	....	195	19	85	17	9	....	....	....
6	....	....	....	....	171	17	88	17	15	....	....	....
7	....	....	....	....	139	15	88	36	13	....	....	....
8	....	....	....	....	112	17	88	24	10	....	....	....
9	....	....	....	....	90	21	88	24	9	....	....	....
10	....	....	....	....	92	20	100	22	9	....	....	....
11	....	....	....	....	92	18	100	25	7.5	....	....	....
12	....	....	....	....	94	17	98	27	7.5	....	....	....
13	....	....	....	....	90	16	96	23	8.0	....	....	....
14	....	....	....	....	76	16	94	40	8.5	....	....	....
15	....	....	....	....	79	19	94	38	8.0	....	....	....
16	....	....	....	....	83	30	104	31	14.0	....	....	....
17	....	....	....	....	92	27	104	25	10.0	....	....	....
18	....	....	....	....	108	27	106	25	8.5	....	....	....
19	....	....	....	....	114	26	102	29	8.5	....	....	....
20	....	....	....	....	102	28	102	25	8.5	....	....	....
21	....	....	....	....	92	28	100	24	9.0	....	....	....
22	....	....	....	....	83	27	100	22	10.0	....	....	....
23	....	....	....	....	76	74	100	22	9.5	....	....	....
24	....	....	....	....	68	78	98	21	9.0	....	....	....
25	....	....	....	....	63	83	96	22	8.5	....	....	....
26	....	....	....	....	57	85	96	21	9.5	....	....	....
27	....	....	....	66	48	85	94	17	10.0	....	....	....
28	....	....	....	67	46	85	88	15	12.0	....	....	....
29	....	....	....	94	39	85	87	13	11.0	....	....	....
30	....	....	....	108	39	90	78	13	8.0	....	....	....
31	....	....	....	....	38	....	88	13	....	....	....	....
Total	....	....	....	335	2936	1198	2905	707	297.5	....	....	....
Mean	....	....	....	83.8	94.7	39.9	93.7	22.8	9.92	....	....	....
Max	....	....	....	....	38	20	78	13	7.5	....	....	....
Min	....	....	....	....	195	90	106	40	15	....	....	....
Acre-ft.	....	....	....	664	5820	2370	5760	1400	590	....	....	....

Discharge or Conejos River near Mogote for 1921.

Drainage Area, 282 Square Miles. Altitude .... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50	45	110	100	446	2120	800	330	238	74	54	54
2	50	45	110	121	624	2030	800	305	238	74	54	54
3	50	45	132	145	850	2200	750	280	200	74	54	48
4	55	45	158	158	1120	2480	705	280	174	74	54	42
5	50	45	158	145	1360	1790	584	238	158	74	54	42
6	50	47	174	121	1420	1420	548	259	145	74	52	44
7	50	47	132	121	1120	1360	512	218	132	67	51	44
8	50	47	110	110	800	1950	469	238	110	67	49	42
9	48	47	74	110	660	2480	446	238	110	67	48	40
10	50	47	74	110	584	2570	446	174	100	67	46	42
11	45	50	74	145	584	2570	416	174	90	67	45	44
12	45	50	74	174	660	2670	416	174	110	67	43	46
13	45	50	74	158	850	2770	423	200	90	67	48	46
14	45	50	74	158	900	2570	430	200	82	60	48	42
15	45	50	85	145	800	2870	438	218	82	60	54	38
16	42	50	100	132	850	2480	446	218	90	60	54	36
17	42	50	115	145	800	2120	426	218	82	60	54	34
18	42	55	130	158	750	1790	406	280	74	60	43	34
19	42	55	145	158	705	1360	386	386	145	60	48	36
20	42	60	130	174	624	1230	469	584	100	60	54	38
21	45	60	120	218	624	1060	416	548	90	60	54	40
22	45	70	130	238	750	1060	512	512	82	60	54	40
23	45	70	145	330	850	1170	469	512	82	54	48	37
24	45	80	140	386	900	1170	446	469	74	60	60	34
25	45	80	135	280	1170	1120	624	416	74	60	67	36
26	48	80	132	259	1230	1120	660	386	74	54	54	38
27	48	90	110	218	1420	1060	624	446	74	54	48	38
28	45	90	110	218	1790	1000	512	358	74	54	54	40
29	48	....	100	238	1950	950	446	305	74	54	54	40
30	45	....	110	330	2200	800	386	280	74	54	54	40
31	42	....	100	....	2380	....	358	280	....	60	....	40
Total	1439	1600	3565	5503	31771	53340	15769	9724	3322	1957	1554	1269
Mean	46.4	57.1	115	183	1030	1780	509	314	111	63.1	51.8	40.9
Max	....	....	174	386	2380	2870	800	584	238	74	67	....
Min	....	....	74	100	446	800	358	174	74	54	43	....
Acre-ft.	2850	3170	7070	10900	63300	106000	31300	19300	6600	3880	3080	2510

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Conejos River near Mogote for 1922.

Drainage Area, 282 Square Miles. Altitude, 8,300 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	99	723	2230	1130	320	85	....	....	....
2	....	....	....	99	940	1770	960	285	94	....	....	....
3	....	....	....	99	1010	1710	834	249	249	....	....	....
4	....	....	....	99	1080	2050	802	228	85	....	....	....
5	....	....	....	99	1176	2130	762	186	78	....	....	....
6	....	....	....	97	1840	2480	738	242	76	....	....	....
7	....	....	....	97	2230	2820	731	204	67	....	....	....
8	....	....	....	94	1810	3190	662	215	58	....	....	....
9	....	....	....	94	1740	3240	604	208	58	....	....	....
10	....	....	....	92	1310	3210	585	171	56	....	....	....
11	....	....	....	90	960	2780	572	162	52	....	....	....
12	....	....	....	90	738	2620	528	168	54	....	....	....
13	....	....	....	92	662	2500	504	177	52	....	....	....
14	....	....	....	94	618	2600	504	200	48	....	....	....
15	....	....	....	97	647	2200	410	249	44	....	....	....
16	....	....	....	82	738	1970	450	227	48	....	....	....
17	....	....	....	60	794	1930	432	230	54	....	....	....
18	....	....	....	44	980	2150	528	174	52	....	....	....
19	....	....	....	92	1510	2000	492	223	50	....	....	....
20	....	....	....	162	1710	1890	450	204	46	....	....	....
21	....	....	....	261	1810	1810	432	177	42	....	....	....
22	....	....	....	285	1950	1920	385	162	42	....	....	....
23	....	....	....	320	2040	2020	355	147	40	....	....	....
24	....	....	....	345	2240	1870	335	126	40	....	....	....
25	....	....	....	400	2460	1690	325	107	44	....	....	....
26	....	....	....	438	2820	1410	316	102	76	....	....	....
27	....	....	....	375	3050	1360	311	112	80	....	....	....
28	....	....	....	420	3310	1230	289	132	71	....	....	....
29	....	....	....	468	3240	1300	280	107	56	....	....	....
30	....	....	....	591	3240	1190	325	102	48	....	....	....
31	....	....	....	....	2870	....	370	92	....	....	....	....
Total	....	....	....	5775	52246	63275	16401	5683	1788	....	....	....
Mean	....	....	....	192	1690	2110	529	183	59.6	....	....	....
Max	....	....	....	591	3310	3240	1130	320	94	....	....	....
Min	....	....	....	44	618	1190	280	92	40	....	....	....
Acre-ft.	....	....	....	11400	104000	126000	32500	11300	3550	....	....	....

Discharge of Conejos River at Mouth for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	73	151	1470	45	142	146	51	59	64
2	....	....	....	70	238	1260	27	128	142	54	59	64
3	....	....	....	70	452	1160	13	117	131	54	56	62
4	....	....	....	70	671	1340	8	104	117	54	56	58
5	....	....	....	67	943	1830	7	82	114	51	56	60
6	....	....	....	59	1210	1430	10	62	114	51	56	60
7	....	....	....	59	1230	1260	10	51	111	51	56	60
8	....	....	....	51	834	1490	10	48	111	51	56	58
9	....	....	....	45	604	1850	9	42	111	54	56	56
10	....	....	....	26	515	2090	10	45	70	54	56	56
11	....	....	....	26	432	2250	10	39	54	45	46	58
12	....	....	....	26	454	2210	12	39	51	45	45	60
13	....	....	....	31	515	2210	16	39	51	45	45	60
14	....	....	....	45	561	2350	22	39	51	45	53	62
15	....	....	....	45	561	2270	26	39	45	45	53	64
16	....	....	....	39	584	2330	32	34	45	45	61	60
17	....	....	....	45	629	1760	37	34	45	45	61	56
18	....	....	....	51	523	1330	51	34	39	51	62	58
19	....	....	....	45	496	960	59	37	45	51	67	60
20	....	....	....	39	436	730	67	37	45	51	70	62
21	....	....	....	39	337	580	74	45	54	51	62	63
22	....	....	....	39	321	488	78	162	51	51	61	62
23	....	....	....	39	396	371	82	249	54	51	61	60
24	....	....	....	101	519	299	86	258	51	51	71	60
25	....	....	....	136	584	266	90	258	45	51	80	60
26	....	....	....	111	681	202	94	254	42	51	80	62
27	....	....	....	91	708	146	101	218	48	54	62	64
28	....	....	....	82	879	121	187	191	48	51	71	64
29	....	....	88	73	1180	110	236	174	51	51	73	64
30	....	....	79	70	1390	70	204	158	51	59	64	64
31	....	....	82	....	1590	....	170	142	....	59	....	64
Total	....	....	....	1763	20624	36233	1883	3301	2133	1573	1814	1885
Mean	....	....	....	58.8	665	1210	60.7	106	71.1	50.7	60.5	60.8
Max	....	....	....	136	1590	2350	236	258	146	59	80	....
Min	....	....	....	26	151	70	7	34	39	45	45	....
Acre-ft.	....	....	....	3500	40900	72000	3730	6520	4230	3120	3600	3740

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Conejos River at La Sauses (Mouth) for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	79	87	518	2980	483	8	27	....	....	....
2	....	....	79	82	846	2470	572	8	26	....	....	....
3	....	....	78	86	1030	2040	446	9	26	....	....	....
4	....	....	75	86	1110	1910	384	9	26	....	....	....
5	....	....	75	91	1230	2000	343	13	26	....	....	....
6	....	....	79	94	1760	2160	299	14	27	....	....	....
7	....	....	81	94	2340	2380	260	15	26	....	....	....
8	....	....	82	93	2490	2620	226	16	26	....	....	....
9	....	....	100	84	2070	2800	191	16	26	....	....	....
10	....	....	84	86	1210	2840	168	15	22	....	....	....
11	....	....	88	86	997	2710	121	15	16	....	....	....
12	....	....	88	79	754	2450	75	14	18	....	....	....
13	....	....	84	81	590	2110	53	11	21	....	....	....
14	....	....	83	79	523	1950	46	12	26	....	....	....
15	....	....	82	81	556	1890	36	12	25	....	....	....
16	....	....	86	66	630	1660	22	13	24	....	....	....
17	....	....	97	64	641	1530	18	20	22	....	....	....
18	....	....	92	62	1390	1400	14	22	19	....	....	....
19	....	....	84	61	2020	1340	14	16	20	....	....	....
20	....	....	90	62	2030	1250	13	12	25	....	....	....
21	....	....	93	63	2060	1060	13	13	28	....	....	....
22	....	....	99	63	2310	991	10	13	32	....	....	....
23	....	....	105	71	2330	890	10	14	32	....	....	....
24	....	....	110	94	2400	844	8	15	32	....	....	....
25	....	....	105	142	2760	762	3	16	29	....	....	....
26	....	....	103	187	2970	686	3	18	30	....	....	....
27	....	....	88	208	3090	597	4	18	33	....	....	....
28	....	....	91	207	3280	526	5	16	35	....	....	....
29	....	....	88	282	3250	479	5	21	37	....	....	....
30	....	....	91	318	3170	476	8	26	39	....	....	....
31	....	....	90	....	3070	....	7	26	....	....	....	....
Total	....	....	2749	3239	55425	49901	3860	466	801	....	....	....
Mean	....	....	88.7	108	1790	1660	125	15.0	26.7	....	....	....
Max	....	....	....	318	3280	2980	483	26	39	....	....	....
Min	....	....	....	61	518	476	3	8	16	....	....	....
Acre-ft.	....	....	5450	6430	110000	98800	7690	922	1580	....	....	....

Discharge of La Garita Creek near La Garita for 1921.

Drainage Area, 61 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	5	27	61	53	50	50	13	....	....
2	....	....	....	5	26	63	50	50	50	13	....	....
3	....	....	....	5	36	67	50	50	58	13	....	....
4	....	....	....	7	67	65	50	50	50	13	....	....
5	....	....	....	5	58	67	49	50	44	13	....	....
6	....	....	....	5	54	67	48	48	40	13	....	....
7	....	....	....	4	54	71	44	40	39	13	....	....
8	....	....	....	4	57	79	44	68	38	13	....	....
9	....	....	....	4	44	91	49	89	34	12	....	....
10	....	....	....	4	52	91	48	56	30	10	....	....
11	....	....	....	4	56	120	46	48	29	8	....	....
12	....	....	....	4	44	172	41	39	29	8	....	....
13	....	....	....	4	46	239	39	39	30	7	....	....
14	....	....	....	4	43	272	38	39	29	7	....	....
15	....	....	5	4	48	247	172	41	28	7	....	....
16	....	....	7	4	43	249	56	41	28	7	....	....
17	....	....	5	5	44	243	48	39	24	7	....	....
18	....	....	7	5	48	202	270	39	20	7	....	....
19	....	....	5	6	52	200	120	39	20	7	....	....
20	....	....	5	6	49	172	70	39	20	7	....	....
21	....	....	7	7	50	172	50	42	20	7	....	....
22	....	....	7	8	56	154	50	39	23	7	....	....
23	....	....	9	13	56	120	60	39	20	7	....	....
24	....	....	9	20	56	85	70	39	21	7	....	....
25	....	....	9	22	50	73	80	39	14	7	....	....
26	....	....	9	26	58	74	70	39	13	7	....	....
27	....	....	9	26	61	69	60	39	13	7	....	....
28	....	....	7	29	71	65	50	39	13	7	....	....
29	....	....	5	30	67	61	50	44	13	7	....	....
30	....	....	7	26	79	61	50	56	13	7	....	....
31	....	....	5	....	83	....	50	55	....	7	....	....
Total	....	....	117	301	1635	3772	2025	1424	853	275	....	....
Mean	....	....	6.88	10	52.7	126	65.3	45.9	28.4	8.87	....	....
Max	....	....	....	30	83	272	270	89	58	13	....	....
Min	....	....	....	4	26	61	38	39	13	7	....	....
Acre-ft.	....	....	232	595	3240	7500	4020	2820	1690	545	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Garita Creek near La Garita for 1922.

Drainage Area, 61 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	8	50	66	17.0	24.0	20.0	....	....	....
2	....	....	....	8	60	62	18.0	24.0	23.0	....	....	....
3	....	....	....	8	61	60	18.0	5.8	20.0	....	....	....
4	....	....	....	8	84	54	18.0	10.0	19.0	....	....	....
5	....	....	....	9	105	52	18.0	8.8	15.0	....	....	....
6	....	....	....	9	129	41	14.0	5.8	13.0	....	....	....
7	....	....	....	9.4	129	41	14.0	6.6	12.0	....	....	....
8	....	....	....	12.0	129	41	12.0	6.6	10.0	....	....	....
9	....	....	....	9.4	30	38	11.0	6.6	9.4	....	....	....
10	....	....	....	12	46	37	11.0	5.0	8.2	....	....	....
11	....	....	....	11	51	36	11.0	12	7.0	....	....	....
12	....	....	....	8.2	45	36	11.0	19.0	7.0	....	....	....
13	....	....	....	11.0	45	29	10.0	15.0	7.0	....	....	....
14	....	....	....	12.0	45	27	7.6	95.0	6.2	....	....	....
15	....	....	....	7.6	45	25	7.0	32.0	6.6	....	....	....
16	....	....	....	6.6	41	25	6.2	29.0	7.0	....	....	....
17	....	....	....	7.0	45	24	5.8	28.0	7.0	....	....	....
18	....	....	....	8.8	56	24	5.8	29.0	7.0	....	....	....
19	....	....	....	6.6	64	24	5.8	31.0	7.0	....	....	....
20	....	....	....	7.6	74	22	5.8	28.0	7.0	....	....	....
21	....	....	....	11.0	88	23	10.0	31.0	6.2	....	....	....
22	....	....	....	19.0	105	18	7.0	31.0	6.2	....	....	....
23	....	....	....	21.0	80	18	8.2	26.0	6.2	....	....	....
24	....	....	....	27.0	67	17	7.6	18.0	6.2	....	....	....
25	....	....	....	24.0	67	18	5.4	14.0	6.2	....	....	....
26	....	....	....	27.0	70	18	4.6	17.0	6.2	....	....	....
27	....	....	....	29.0	61	18	5.0	14.0	6.2	....	....	....
28	....	....	....	32.0	67	18	27.0	22.0	6.2	....	....	....
29	....	....	....	29.0	72	18	9.4	25.0	7.0	....	....	....
30	....	....	....	48.0	72	18	17.0	21.0	7.0	....	....	....
31	....	....	....	....	72	....	11.0	21.0	....	....	....	....
Total	....	....	....	4462	2155	948	339.2	661.2	282	....	....	....
Mean	....	....	....	14.9	69.5	31.6	10.9	21.3	9.40	....	....	....
Max.	....	....	....	48.0	129	66	27	95	23	....	....	....
Min.	....	....	....	6.6	30	17	4.6	5	6.2	....	....	....
Acre-ft.	....	....	....	887	4270	1880	670	1310	559	....	....	....

Discharge of Carnero Creek near La Garita for 1921.

Drainage Area, 117 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	10	44	53	31	29	40	10	....	....
2	....	....	....	10	48	50	30	29	32	11	....	....
3	....	....	....	10	51	50	27	28	31	11	....	....
4	....	....	....	10	54	80	30	27	28	10	....	....
5	....	....	....	10	56	80	28	26	27	10	....	....
6	....	....	....	12	60	73	23	25	25	10	....	....
7	....	....	....	12	51	98	21	34	23	12	....	....
8	....	....	....	12	48	105	20	35	23	10	....	....
9	....	....	....	14	39	102	20	30	21	10	....	....
10	....	....	....	14	41	98	20	28	20	10	....	....
11	....	....	....	14	41	97	16	27	20	10	....	....
12	....	....	....	16	41	98	25	27	19	10	....	....
13	....	....	....	16	44	121	20	27	18	10	....	....
14	....	....	....	16	50	113	21	27	17	10	....	....
15	....	....	....	16	53	124	29	29	15	10	....	....
16	....	....	....	18	69	108	26	23	15	10	....	....
17	....	....	....	18	60	95	25	20	16	10	....	....
18	....	....	....	20	55	84	30	22	15	9	....	....
19	....	....	....	21	53	78	41	23	14	8	....	....
20	....	....	....	24	50	78	29	32	14	8	....	....
21	....	....	....	23	46	77	24	27	12	8	....	....
22	....	....	....	22	48	63	38	34	12	8	....	....
23	....	....	....	43	48	54	55	37	12	8	....	....
24	....	....	....	48	73	50	58	33	11	8	....	....
25	....	....	....	27	63	50	56	35	12	9	....	....
26	....	....	....	27	60	46	44	31	12	7	....	....
27	....	....	....	26	55	39	37	27	11	7	....	....
28	....	....	....	25	59	37	39	29	10	7	....	....
29	....	....	....	26	60	35	37	29	10	14	....	....
30	....	....	....	42	59	32	34	28	10	9	....	....
31	....	....	....	....	56	....	35	31	....	7	....	....
Total	....	....	....	602	1635	2268	969	889	545	291	....	....
Mean	....	....	....	20.1	52.7	75.6	31.3	28.7	18.2	9.39	....	....
Max.	....	....	....	48	73	124	58	37	40	14	....	....
Min.	....	....	....	10	39	32	16	20	10	7	....	....
Acre-ft.	....	....	....	1200	3240	4500	1920	1770	1080	577	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Carnero Creek near La Garita for 1922.

Drainage Area, 117 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	40	43	16	23	22	....	....	....
2	....	....	....	....	43	42	16	43	20	....	....	....
3	....	....	....	....	43	40	14	36	24	....	....	....
4	....	....	....	....	44	39	13	35	25	....	....	....
5	....	....	....	....	56	37	10	41	20	....	....	....
6	....	....	....	....	57	35	9.8	33	18	....	....	....
7	....	....	....	....	57	34	8.4	31	16	....	....	....
8	....	....	....	....	52	34	7.0	25	16	....	....	....
9	....	....	....	....	50	30	7.0	24	14	....	....	....
10	....	....	....	....	47	29	7.0	24	14	....	....	....
11	....	....	....	....	41	28	7.0	20	14	....	....	....
12	....	....	....	....	40	25	7.0	18	14	....	....	....
13	....	....	....	....	49	24	7.0	23	8	....	....	....
14	....	....	....	....	48	24	7.0	44	12	....	....	....
15	....	....	....	....	47	22	7.0	55	10	....	....	....
16	....	....	....	....	43	20	7.0	40	10	....	....	....
17	....	....	....	....	42	19	11.0	42	10	....	....	....
18	....	....	....	....	43	18	6.0	40	9.1	....	....	....
19	....	....	....	....	42	18	6.0	39	10	....	....	....
20	....	....	....	....	45	18	5.5	41	10	....	....	....
21	....	....	....	....	45	19	5.5	58	9.1	....	....	....
22	....	....	....	....	43	18	6.5	53	8.4	....	....	....
23	....	....	....	....	42	20	5.5	43	7.0	....	....	....
24	....	....	....	35	48	20	5.5	40	7.0	....	....	....
25	....	....	....	34	48	18	5.0	36	7.0	....	....	....
26	....	....	....	32	45	14	4.5	34	7.0	....	....	....
27	....	....	....	28	40	14	4.0	31	7.0	....	....	....
28	....	....	....	27	40	13	4.0	25	7.7	....	....	....
29	....	....	....	37	40	14	4.5	25	7.0	....	....	....
30	....	....	....	38	40	15	13.0	24	7.0	....	....	....
31	....	....	....	....	40	....	19	20	....	....	....	....
Total	....	....	....	231	1400	744	255.7	1066	370.3	....	....	....
Mean	....	....	....	33.0	45.2	23.8	8.25	34.4	12.3	....	....	....
Max	....	....	....	....	57	43	19	58	25	....	....	....
Min	....	....	....	....	40	13	4	20	7	....	....	....
Acre-ft.	....	....	....	458	2780	1420	507	2120	732	....	....	....

Discharge of Saguache Creek Near Saguache for 1921.

Drainage Area, 595 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	44	94	407	174	144	113	57	51	....
2	....	....	....	44	131	380	165	128	98	57	51	....
3	....	....	....	44	156	393	165	120	98	57	51	....
4	....	....	....	44	192	496	183	120	97	57	51	....
5	....	....	....	44	222	542	202	128	90	57	51	....
6	....	....	....	44	243	526	165	119	97	61	48	....
7	....	....	....	44	183	526	139	112	95	61	48	....
8	....	....	....	42	174	526	139	112	95	61	48	....
9	....	....	....	44	147	558	131	110	95	61	48	....
10	....	....	....	44	139	590	139	110	87	61	59	....
11	....	....	....	44	124	657	147	118	81	60	59	....
12	....	....	....	48	124	657	147	108	74	60	48	....
13	....	....	....	48	131	623	147	108	74	60	48	....
14	....	....	51	48	165	640	147	108	74	60	51	....
15	....	....	54	46	183	674	174	107	67	60	48	....
16	....	....	54	42	183	640	183	107	67	54	48	....
17	....	....	54	48	222	590	174	107	67	54	48	....
18	....	....	64	51	254	511	192	98	66	54	46	....
19	....	....	70	51	243	436	174	98	72	54	46	....
20	....	....	75	54	212	380	165	136	66	54	46	....
21	....	....	59	54	174	339	165	151	65	54	46	....
22	....	....	54	51	192	300	212	119	65	54	44	....
23	....	....	51	70	232	288	202	142	65	54	44	....
24	....	....	48	108	366	288	202	133	64	54	44	....
25	....	....	51	70	326	276	192	158	64	54	44	....
26	....	....	48	54	276	265	154	133	64	51	44	....
27	....	....	44	54	276	222	154	116	64	51	44	....
28	....	....	44	54	300	212	144	124	64	51	46	....
29	....	....	46	54	339	202	136	116	58	51	46	....
30	....	....	46	64	393	183	136	107	58	51	46	....
31	....	....	44	....	421	....	152	114	....	51	....	....
Total	....	....	....	1551	6817	13327	5101	3711	2304	1736	1442	....
Mean	....	....	....	51.7	220	444	165	120	76.8	56.0	48.1	....
Max	....	....	....	108	421	674	212	158	113	61	59	....
Min	....	....	....	42	94	183	131	98	58	51	44	....
Acre-ft.	....	....	....	3080	13500	26400	10100	7380	4570	3440	2860	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Saguache Creek at Saguache for 1922.

Drainage Area, 595 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	45	111	321	243	156	58	....	....	....
2	....	....	....	45	102	243	194	106	60	....	....	....
3	....	....	....	47	103	213	149	91	61	....	....	....
4	....	....	....	47	105	225	134	98	62	....	....	....
5	....	....	....	46	131	237	121	82	54	....	....	....
6	....	....	....	50	209	247	107	84	52	....	....	....
7	....	....	....	49	245	262	103	79	49	....	....	....
8	....	....	....	48	211	274	97	78	47	....	....	....
9	....	....	....	48	178	285	88	76	48	....	....	....
10	....	....	....	50	151	278	85	75	49	....	....	....
11	....	....	....	49	121	268	85	75	50	....	....	....
12	....	....	....	48	108	235	81	76	49	....	....	....
13	....	....	....	47	100	239	76	76	48	....	....	....
14	....	....	....	43	100	243	79	76	47	....	....	....
15	....	....	....	45	112	215	96	90	42	....	....	....
16	....	....	....	46	111	213	92	91	42	....	....	....
17	....	....	....	42	102	207	92	92	39	....	....	....
18	....	....	....	40	141	190	102	91	38	....	....	....
19	....	....	....	38	171	180	113	85	40	....	....	....
20	....	....	....	41	171	173	134	155	40	....	....	....
21	....	....	....	60	186	175	103	80	38	....	....	....
22	....	....	....	102	175	184	111	75	38	....	....	....
23	....	....	....	118	177	180	137	70	39	....	....	....
24	....	....	....	85	205	211	132	65	40	....	....	....
25	....	....	....	74	235	247	116	60	39	....	....	....
26	....	....	....	71	253	201	107	55	43	....	....	....
27	....	....	....	70	262	173	100	51	51	....	....	....
28	....	....	....	63	308	151	102	49	51	....	....	....
29	....	....	....	71	386	164	98	61	50	....	....	....
30	....	....	....	71	332	190	105	58	50	....	....	....
31	....	....	....	....	334	....	118	60	....	....	....	....
Total	....	....	....	1699	5636	6624	3500	2516	1414	....	....	....
Mean	....	....	....	56.6	182	221	113	81.2	47.1	....	....	....
Max	....	....	....	118	386	321	243	156	62	....	....	....
Min	....	....	....	38	102	151	76	49	38	....	....	....
Acre-ft.	....	....	....	3370	11200	13200	6950	4990	2800	....	....	....

Discharge of San Luis Creek at Villa Grove for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	14	14	15	6.8	6.0	5.2	....	....	....
2	....	....	....	14	14	19	7.2	6.8	5.6	....	....	....
3	....	....	....	17	14	18	6.8	4.6	5.2	....	....	....
4	....	....	....	16	19	16	6.4	3.8	5.6	....	....	....
5	....	....	....	15	21	15	6.0	5.6	5.6	....	....	....
6	....	....	....	17	31	15	6.4	5.2	5.2	....	....	....
7	....	....	....	16	34	13	6.8	4.8	5.6	....	....	....
8	....	....	....	15	34	11	6.4	6.0	6.0	....	....	....
9	....	....	....	15	32	9.9	6.0	12	5.6	....	....	....
10	....	....	....	15	25	8.8	5.6	6.0	6.0	....	....	....
11	....	....	....	15	16	8.8	6.0	6.0	6.0	....	....	....
12	....	....	....	17	19	8.8	5.6	7.2	6.0	....	....	....
13	....	....	....	15	21	7.2	5.6	6.0	5.6	....	....	....
14	....	....	....	15	14	8.8	5.2	8.0	5.6	....	....	....
15	....	....	....	16	14	8.0	4.8	8.0	6.0	....	....	....
16	....	....	....	16	16	6.8	4.8	8.0	5.6	....	....	....
17	....	....	....	13	14	6.0	4.8	7.2	6.0	....	....	....
18	....	....	....	11	19	6.4	5.2	7.2	5.6	....	....	....
19	....	....	....	11	14	7.6	5.2	7.2	5.6	....	....	....
20	....	....	....	16	14	7.6	4.8	7.2	6.0	....	....	....
21	....	....	....	15	14	7.6	5.2	7.2	5.6	....	....	....
22	....	....	....	16	16	7.6	4.8	5.6	5.6	....	....	....
23	....	....	....	14	21	7.2	4.8	5.2	6.0	....	....	....
24	....	....	....	16	21	6.8	4.6	5.2	6.0	....	....	....
25	....	....	....	13	24	6.8	4.6	4.6	6.4	....	....	....
26	....	....	....	16	18	6.8	4.8	4.6	6.0	....	....	....
27	....	....	....	14	18	7.2	4.8	4.6	6.0	....	....	....
28	....	....	....	14	17	6.4	4.6	4.8	6.0	....	....	....
29	....	....	....	14	17	6.0	4.3	4.8	6.4	....	....	....
30	....	....	....	14	16	6.4	4.8	5.2	6.0	....	....	....
31	....	....	....	....	24	....	4.3	5.2	....	....	....	....
Total	....	....	....	445	605	285.5	168.0	189.8	173.6	....	....	....
Mean	....	....	....	14.8	19.5	9.52	5.42	6.11	5.79	....	....	....
Max	....	....	....	17	34	19	7.2	12	6.4	....	....	....
Min	....	....	....	11	14	6	4.3	3.8	5.2	....	....	....
Acre-ft.	....	....	....	881	1200	566	333	376	344	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Kerber Creek at Villa Grove for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	7.5	4.7	6.6	1.8	0	0	....	....	....
2	....	....	....	8.0	5.1	6.3	0	1.0	0	....	....	....
3	....	....	....	9.0	6.3	6.0	0	0	0	....	....	....
4	....	....	....	7.5	6.9	5.7	0	0	0	....	....	....
5	....	....	....	8.0	8.4	5.4	0	0	0	....	....	....
6	....	....	....	9.0	9.8	5.3	0	0	0	....	....	....
7	....	....	....	8.0	11	5.0	0	0	0	....	....	....
8	....	....	....	7.5	11	4.2	0	0	0	....	....	....
9	....	....	....	7.5	12	3.3	0	0	0	....	....	....
10	....	....	....	7.5	11	3.1	0	0	0	....	....	....
11	....	....	....	7.5	7.9	2.7	0	0	0	....	....	....
12	....	....	....	6.9	8.6	2.6	0	0	0	....	....	....
13	....	....	....	7.7	9.3	2.5	0	0	0	....	....	....
14	....	....	....	3.6	8.0	2.5	0	0	0	....	....	....
15	....	....	....	6.0	9.7	2.4	0	0	0	....	....	....
16	....	....	....	9.1	7.4	2.3	0	0	0	....	....	....
17	....	....	....	4.7	7.0	2.2	0	0	0	....	....	....
18	....	....	....	6.2	6.9	2.2	0	0	0	....	....	....
19	....	....	....	5.0	7.4	2.2	0	0	0	....	....	....
20	....	....	....	3.3	7.5	2.2	0	0	0	....	....	....
21	....	....	....	4.1	9.3	1.2	0	0	0	....	....	....
22	....	....	....	5.4	9.7	0.7	0	0	0	....	....	....
23	....	....	....	4.7	10	1.1	0	0	0	....	....	....
24	....	....	....	4.4	1	0.5	0	0	0	....	....	....
25	....	....	....	3.7	11	0	0	0	0	....	....	....
26	....	....	....	3.1	11	0	0	0	0	....	....	....
27	....	....	....	3.0	10	0	0	0	0	....	....	....
28	....	....	....	3.1	8.9	0	0	0	0	....	....	....
29	....	....	....	3.8	8.4	0	0	0	0	....	....	....
30	....	....	....	3.9	7.4	0	2.0	0	0	....	....	....
31	....	....	....	....	6.3	....	0	0	....	....	....	....
Total	....	....	....	178.7	268.9	78.2	3.8	1.0	0.0	....	....	....
Mean	....	....	....	5.96	8.68	2.61	....	....	....	....	....	....
Max	....	....	....	9	12	6.6	2.0	1.0	0.0	....	....	....
Min	....	....	....	3	4.7	0.0	0.0	0.0	0.0	....	....	....
Acre-ft.	....	....	....	355	534	155	7.6	2.0	0.0	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

GREEN RIVER DRAINAGE

B. T. CHASE, IRRIGATION DIVISION ENGINEER

YAMPA RIVER AT STEAMBOAT SPRINGS

Location—This station was moved from the lower steel bridge to the Fifth Street bridge at Steamboat Springs on April 26, 1915. It is about one-quarter mile below Spring Creek and one-half mile above Soda Creek.

Records Available—May 3, 1904, to October 31, 1906; March 1, 1910, to September 30, 1922.

Drainage Area—500 square miles.

Gage—Automatic recording gage and vertical staff gage.

Channel—Practically permanent.

Discharge Measurements—Made from highway bridge.

Winter Flow—Hot Springs above keep the river practically open during the winter months.

Diversions—There are court decrees for diversions of 115 second-feet from the Yampa River between Yampa and Steamboat Springs, and diversions of 231 second-feet from intervening tributaries. There are decrees for 258 second-feet above Yampa.

YAMPA RIVER NEAR MAYBELL

Location—At highway bridge about three miles above Maybell in Sec. 2, T. 6 N., R. 95 W. Nearest tributary, Deception Creek, enters about one mile below.

Records Available—April 24, 1916, to September 30, 1922. From April 17, 1904, to October 31, 1905, and from June 12, 1910, to November 30, 1912, a station was maintained at the Thornburg bridge, about nine miles below Maybell. The present station was established April 25, 1916.

Gage—Slope and automatic gages.

Channel—Permanent.

Winter Flow—Discharge estimated from measurements during winter months.

Diversions—Between this station and Craig there are decrees for diversions of 131 second-feet from the Yampa River and 3,269 second-feet from intervening tributaries.

WALTON CREEK NEAR STEAMBOAT SPRINGS

Location—In Sec. 11, T. 5 N., R. 84 W., at the mouth of canon and seven miles from Steamboat Springs.

Records Available—May 23, 1921, to September 30, 1922.

Drainage Area—38 square miles.

Gage—Automatic and staff gages.

Discharge Measurements—From private highway bridge during high stages and wading at low stages.

ELK RIVER NEAR CLARK

Location—At Kinney's Ranch, 2 miles above Clark Postoffice.

Records Available—May 1, 1910, to September 30, 1922.

Drainage Area—206 square miles.

Gage—Chain gage.

Channel—Rough but permanent.

Diversions–There are court decrees for diversions of 4 second-feet from Elk River above this station, and 25 second-feet from the tributaries entering above.

Co-operation—The State Engineer maintains the station in co-operation with the Elk River Irrigation & Construction Co.

ELK RIVER NEAR TRULL

Location—Two miles southwest of Trull Postoffice on the road between Steamboat Springs and Hayden; below all tributaries; none above the station for several miles.

Records Available—May 2, 1904, to August 16, 1906; May 1, 1910, to September 30, 1922.

Drainage Area—415 square miles.

Gage—Staff and automatic gages.

Channel—Fairly permanent.

Discharge Measurements—Made from highway bridge.

Winter Flow—Discharge estimated from measurements.

Diversions—Between this station and that near Clark there are court decrees for diversions of 111 second-feet from Elk River and 62 second-feet from intervening tributaries. There are no decrees for diversions below the station.

WILLIAMS RIVER AT HAMILTON

Location—Near Hamilton, at highway bridge, on the road from Meeker to Craig. Morapos Creek, the nearest tributary, enters some distance below the station.

Records Available—April 29, 1904, to October 31, 1906; April 15, 1910, to September 30, 1922.

Drainage Area—341 square miles.

Gage—Chain gage.

Channel—Shifting.

Discharge Measurements—Made from highway bridge.

Winter Flow—Discharge estimates from measurements.

MIDDLE FORK OF LITTLE SNAKE RIVER AT GARDNER'S RANCH

Location—At Gardner's Ranch, in Sec. 21, T. 12 N., R. 86 W., on the county road bridge, 10 miles above Battle Creek.

Records Available—May 8, 1916, to September 30, 1922.

Drainage Area—152 square miles.

Gage—Bristol automatic gage.

Channel—Practically permanent.

Discharge Measurements—From bridge.

Co-operation—The State Engineer maintains the station in co-operation with the Elk River Irrigation & Construction Co.

SOUTH FORK LITTLE SNAKE RIVER AT FLEMING'S

Location—In Sec. 1, T. 11 N., R. 87 W., at Flemings and six miles upstream from the mouth.

Records Available—April 8 to September 30, 1922.

Drainage Area—22 square miles.

Gage——Automatic and staff gages.

Discharge Measurements—Wading at low stages and from footbridge during high stages.

SLATER CREEK AT BAXTER'S RANCH, NEAR SLATER

Location—At Baxter's Ranch, in Sec. 22, T. 11 N., R. 89 W., 10 miles south of Slater.

Records Available—May 6, 1912, to October 23, 1920, April 21 to September 30, 1922.

Drainage Area—80 square miles.

Gage—Bristol automatic gage and vertical staff.

Channel—Rough, but permanent.

Discharge Measurements—From bridge.

Diversions—There are court decrees for diversions of 14 second-feet from Slater Creek, all below the station.

Co-operation—The State Engineer maintains the station in co-operation with the Elk River Irrigation & Construction Co.

ROARING FORK SLATER CREEK, NEAR BAXTER'S RANCH

Location—In Sec. 36, T. 10 N., R. 89 W., 6th P. M., one-quarter of a mile above mouth and 12 miles south of Slater ,Wyo.

Records Available—May 1 to September 30, 1922.

Gage—Automatic and staff gages.

Discharge Measurements—Made from footbridge during high stages and wading at low stages.

Co-operation—Station maintained in co-operation with the Elk River Irrigation & Construction Co.

SAVERY CREEK NEAR SAVERY, WYO.

Location—At bridge on road about one-half mile southeast of Savery, Wyo., and about 1½ miles above mouth.

Records Available—May 1, 1915, to November 17, 1916; April 5, 1918, to September 30, 1922.

Drainage Area—354 square miles.

Gage—Vertical staff.

Channel—Practically permanent.

Discharge Measurements—Made from bridge at high water and by wading at low stages.

Winter Flow—Records discontinued during the winter months.

Accuracy—Records considered good.

LITTLE SNAKE RIVER NEAR DIXON, WYO.

Location—One mile west of Dixon, Wyo., in Sec. 6, T. 12 N., R. 90 W. Nearest tributaries are Cottonwood Creek, which enters a short distance east of Dixon, and Willow Creek, which enters a mile or less downstream.

Records Available—May 27, 1910, to September 30, 1922.

Drainage Area—1,294 square miles.

Gage—Chain gage.

Channel—Slightly shifting during high water.

FOUR-MILE CREEK AT RANGER STATION, NEAR BAGGS, WYO.

Location—In Colorado, at forest ranger station near Ryan's Ranch, in Sec. 9, T. 10 N., R. 90 W., 20 miles southeast of Baggs, Wyoming.

Records Available—May 1, 1912, to September 30, 1922.

Drainage Area—Approximately 4 square miles.

Gage—Bristol automatic gage.

Channel—Probably permanent.

Discharge Measurements—Made from footbridge.

Co-operation—The State Engineer maintains the station in co-operation with the Elk River Irrigation & Construction Co.

WILLOW CREEK AT RYAN'S RANCH, NEAR BAGGS, WYO.

Location—In Colorado, about Sec. 26, T. 11 N., R. 90 W., 2 miles northeast of Ryan's ranch house and 22 miles southeast of Baggs, Wyoming. No important tributary between the station and the mouth of Willow Creek.

Records Available—May 4, 1912, to September 30, 1922.

Drainage Area—Approximately 5 square miles.

Gage—Bristol automatic gage.

Channel—Small cobblestones, placed especially for the station.

Discharge Measurements—Made from footbridge.

Co-operation—Station maintained by the State Engineer in co-operation with the Elk River Irrigation & Construction Co.

LITTLE SNAKE RIVER NEAR LILY

Location—In Sec. 20, T. 7 N., R. 98 W., sixteen miles west of Sunbeam and six miles above confluence with Yampa River.

Records Available—May 1 to September 30, 1922.

Gage—Automatic and slope gages.

Channel—Fairly permanent.

Discharge Measurements—From bridge during high stages and wading during low stages.

WHITE RIVER NEAR MEEKER

Location—At the Rees Ranch, 3½ miles east of Meeker, in Sec. 24, T. 1 N., R. 93 W. Nearest tributary above is Curtis Creek; nearest below is Sulphur Creek. Station moved from Van Cleave's to Rees' Ranch October 20, 1913.

Records Available—May 7, 1910, to September 30, 1922. From April 12, 1904, to October 31, 1906, a station was maintained 2.5 miles below this point by the United States Geological Survey.

Drainage Area—634 square miles.

Gage—Automatic recording gage.

Channel—Practically permanent.

Discharge Measurements—Made from private road bridge.

Winter Flow—Discharge estimates from measurements during winter months.

Diversions—There are court decrees for diversions of 186 second-feet from White River above the station and 59 second-feet from tributaries entering above. Below there are decrees for diversions of 198 second-feet from White River.

Note—Station moved to get above the head of the Meeker Power Canal. Diversion started during winter of 1912-1913.

1913 records prior to October 20 corrected for the diversion. Average diversion. about 90 second-feet.

Discharge of Yampa River at Steamboat Springs for 1921.

Drainage Area, 500 Square Miles. Altitude, 6,680 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	126	....	190	256	1300	4430	1050	291	252	114	126	....
2	....	....	190	295	1480	4280	940	334	252	116	126	....
3	....	....	190	418	1830	4280	788	354	216	116	126	....
4	....	152	210	622	2100	4200	902	303	201	116	126	....
5	....	....	210	735	2400	4430	1130	262	195	114	126	....
6	....	....	210	480	2700	4940	826	236	195	114	126	....
7	....	....	195	427	2830	4940	656	229	180	114	126	....
8	....	....	195	371	2340	4760	558	223	174	112	126	....
9	....	....	195	388	2340	5020	501	210	163	109	126	....
10	....	....	195	422	2220	5020	465	210	158	107	126	....
11	....	....	195	577	2040	5190	475	210	152	104	126	....
12	....	....	195	826	1880	5100	470	204	155	102	126	....
13	....	....	201	788	1830	4760	440	192	152	102	126	....
14	....	....	201	940	1990	5870	470	245	152	102	126	....
15	....	....	210	788	2280	5780	490	266	155	102	121	....
16	....	....	226	649	2400	4940	440	236	158	102	121	....
17	....	....	276	788	2760	3910	431	210	158	98	116	....
18	....	....	334	826	2830	3090	396	189	158	98	121	....
19	....	....	418	1090	2640	2640	400	180	152	98	121	....
20	....	....	418	1130	2220	2400	400	226	147	98	121	....
21	....	....	358	940	2400	2280	362	210	139	98	116	....
22	....	....	330	826	2580	2100	314	210	131	98	116	....
23	....	....	342	1130	2760	2040	318	210	124	98	114	....
24	....	....	318	1170	3020	1990	334	210	116	98	114	....
25	....	....	299	902	3220	1780	330	210	114	109	116	....
26	....	....	303	750	3220	1730	306	210	112	112	121	....
27	....	....	269	902	3160	1580	284	210	109	119	121	....
28	....	....	269	978	3630	1480	262	210	112	126	121	....
29	....	....	269	1050	3910	1340	242	216	114	126	121	....
30	....	....	266	1130	4430	1170	226	210	114	126	121	....
31	....	....	249	....	4510	....	226	216	....	126	....	108
Total	....	....	7926	22594	81250	105430	15432	7132	4710	3374	3666	....
Mean	135	165	256	753	2620	3510	498	230	157	109	122	115
Max	....	....	418	1170	4510	5870	1130	354	252	126	126	....
Min	....	....	190	256	1300	1170	226	180	109	98	114	....
Acre-ft.	8300	9160	15700	44800	161000	209000	30600	14100	9340	6700	7260	7070

Discharge of Yampa River at Steamboat Springs for 1922.

Drainage Area, 500 Square Miles. Altitude, 6,680 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	180	940	2160	431	100	106	....	....	....
2	....	....	....	210	826	2100	358	108	97	....	....	....
3	....	....	....	295	902	1990	306	112	92	....	....	....
4	....	....	....	396	864	1940	299	112	86	....	....	....
5	....	....	....	418	978	2220	291	112	84	....	....	....
6	....	....	....	405	1090	2280	284	112	82	....	....	....
7	....	....	....	346	1210	2280	276	112	84	....	....	....
8	....	....	....	338	1340	2520	249	112	85	....	....	....
9	....	....	....	354	1340	2580	242	108	84	....	....	....
10	....	....	....	284	1130	2400	242	105	81	....	....	....
11	....	....	....	284	940	2160	236	112	82	....	....	....
12	....	....	....	256	902	1990	226	116	82	....	....	....
13	....	....	....	249	902	1940	169	114	79	....	....	....
14	....	....	....	242	864	1990	163	112	77	....	....	....
15	....	....	....	220	788	1580	152	118	74	....	....	....
16	....	....	....	204	750	1390	140	133	74	....	....	....
17	....	....	....	189	864	1390	133	130	73	....	....	....
18	108	....	....	172	1170	1340	124	138	72	....	....	....
19	....	....	....	195	1340	1170	122	145	73	....	....	....
20	....	....	....	242	1440	1050	120	152	74	....	....	....
21	....	....	....	346	1630	978	108	152	78	....	....	....
22	....	....	....	524	1630	864	112	163	82	....	....	....
23	....	152	284	414	1880	788	118	158	84	....	....	....
24	....	....	362	826	2160	691	114	158	89	....	....	....
25	....	....	354	940	2340	571	114	147	92	....	....	....
26	....	....	306	902	2460	465	116	145	95	....	....	....
27	....	....	284	978	2760	431	116	140	105	....	....	....
28	....	....	242	978	2960	379	118	140	108	....	....	....
29	....	....	210	978	2960	388	120	122	102	....	....	....
30	....	....	180	1020	2760	496	112	108	95	....	....	....
31	....	....	166	....	2460	....	105	106	....	....	....	....
Total	....	....	....	13385	46580	44521	5816	3902	2571	....	....	....
Mean	110	132	180	446	1500	1480	188	126	85.7	....	....	....
Max	....	....	....	1020	2960	2580	431	158	108	....	....	....
Min	....	....	....	172	750	379	105	100	72	....	....	....
Acre-ft.	6760	7330	10700	26500	92200	88100	11600	7750	5100	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Yampa River Near Maybell for 1921.

Drainage Area, 3,670 Square Miles. Altitude, 5,900 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	1380	1850	4360	14100	4100	830	400	301	296	320
2........	....	....	1380	1380	3380	13600	3860	910	360	301	296	310
3........	....	....	1390	1280	2620	13100	3460	1080	370	301	301	320
4........	....	....	1440	1330	2410	13200	3140	1050	380	301	301	340
5........	....	....	2320	1550	2550	13200	2690	930	340	301	301	340
6........	....	....	3140	1550	3060	13200	3220	830	330	296	301	340
7........	....	....	2380	1550	3300	14300	2830	772	330	296	301	....
8........	....	....	1550	1670	3940	15000	2410	830	310	292	301	....
9........	....	....	1130	1850	4720	14300	2750	740	310	292	301	....
10........	....	....	840	1970	5950	13900	2130	756	301	292	301	....
11........	....	....	724	2250	7320	13800	1910	740	301	292	301	....
12........	....	....	850	2380	8380	14000	1790	724	301	287	301	....
13........	....	....	1130	2410	9590	15200	1790	724	301	287	301	....
14........	....	....	1380	2440	10500	14400	1850	700	296	292	301	....
15........	....	....	1730	3300	11700	14800	1730	676	301	287	296	....
16........	....	....	1970	3380	12400	16600	1910	676	301	287	296	....
17........	....	....	1910	2480	12600	14900	1970	700	301	292	296	....
18........	....	....	1790	2830	12300	13400	1970	676	301	287	296	....
19........	....	....	1670	3460	12300	12300	1910	676	301	287	296	....
20........	....	....	1550	2980	12300	11300	1790	625	301	287	292	....
21........	....	....	1440	2550	12300	10200	1670	576	301	287	292	....
22........	....	....	1330	2380	12300	9200	1550	576	301	287	292	....
23........	....	....	1230	2410	12100	8270	1440	560	301	287	287	....
24........	....	....	1080	2550	11800	7420	1230	540	301	287	287	....
25........	....	....	980	2690	11500	6580	1030	520	301	287	292	....
26........	....	....	1010	2830	11800	5760	1130	500	310	287	292	....
27........	....	....	1230	2980	12100	5000	1060	480	310	287	301	....
28........	....	....	1790	2980	12400	5100	1030	460	301	292	301	....
29........	....	....	2410	4530	12700	4720	980	435	296	296	310	....
30........	....	....	2550	5190	13800	4440	890	420	301	296	310	....
31........	....	....	2250	....	14400	....	830	435	....	296	....	....
Total	....	....	48954	74980	282880	345290	61550	21147	9450	9047	8940	....
Mean..	....	....	1580	2500	9130	11500	1990	682	315	292	298	330
Max....	....	....	3140	5190	14400	16600	4100	1080	400	301	310	....
Min.....	....	....	724	1280	2410	4440	830	420	296	287	287	....
Acre-ft.	....	....	97200	149000	561000	684000	122000	41900	18700	18000	17700	20300

Discharge of Yampa River near Maybell for 1922.

Drainage Area, 3,670 Square Miles. Altitude, 5,900 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	....	940	4110	8780	2520	420	310	....	....	....
2........	....	....	....	1040	4110	7570	2550	420	310	....	....	....
3........	....	....	....	1080	4190	7240	2490	360	310	....	....	....
4........	....	....	....	1060	4600	6930	2250	420	310	....	....	....
5........	....	....	....	1180	4760	6820	2040	420	260	....	....	....
6........	....	....	....	1120	5280	7140	1860	390	260	....	....	....
7........	....	....	....	1110	6100	7570	1760	360	260	....	....	....
8........	....	....	....	1130	6930	7460	1640	360	260	....	....	....
9........	....	....	....	1110	6930	8230	1800	310	210	....	....	....
10........	....	....	....	1060	7140	8560	1860	310	210	....	....	....
11........	....	....	....	1080	5900	8670	1750	360	210	....	....	....
12........	....	....	....	1160	4680	7900	1660	360	210	....	....	....
13........	....	....	....	1130	4510	7240	1580	360	165	....	....	....
14........	....	....	....	1120	4680	6820	1500	360	135	....	....	....
15........	....	....	....	1010	5100	6510	1440	360	135	....	....	....
16........	....	....	....	964	4850	5800	1340	360	135	....	....	....
17........	....	....	....	964	4850	4940	1180	310	135	....	....	....
18........	....	....	....	1000	5440	4510	1080	310	135	....	....	....
19........	....	....	....	988	7240	4850	940	310	135	....	....	....
20........	....	....	....	1060	7790	4760	600	360	135	....	....	....
21........	....	....	....	1790	8230	4680	550	420	135	....	....	....
22........	....	....	....	2280	9000	5280	560	500	135	....	....	....
23........	....	....	1510	2320	8560	4430	500	420	135	....	....	....
24........	....	....	....	2160	9110	4270	520	420	135	....	....	....
25........	....	....	....	2910	9660	3870	420	360	135	....	....	....
26........	....	....	....	3070	10000	3550	396	360	135	....	....	....
27........	....	....	....	2990	10100	3230	372	335	135	....	....	....
28........	....	....	....	3150	10500	2840	378	310	135	....	....	....
29........	294	....	....	3470	10500	2680	384	260	135	....	....	....
30........	....	....	....	3790	10600	2540	372	260	135	....	....	....
31........	....	....	....	....	10000	....	360	260	....	....	....	....
Total	....	....	....	49226	215450	175670	38652	11125	5580	....	....	....
Mean..	300	385	760	1640	6950	5860	1250	359	186	....	....	....
Max....	....	....	....	3790	10600	8780	2550	500	310	....	....	....
Min.....	....	....	....	940	4110	2540	360	260	135	....	....	....
Acre-ft.	18400	21400	46700	97600	427000	349000	76900	22100	11100	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Walton Creek near Steamboat Springs for 1921.
Drainage Area, 38 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	....	935	386	60	23	10	5.6	7.6
2	....	....	....	....	....	990	330	44	18	11	7	7.6
3	....	....	....	....	....	880	224	40	13	12	7.4	6
4	....	....	....	....	....	830	250	35	12	13	6	6
5	....	....	....	....	....	780	190	27	11	14	6.4	6
6	....	....	....	....	....	1270	160	26	9.5	15	6.8	6
7	....	....	....	....	....	1320	146	22	9.2	16	4.5	7
8	....	....	....	....	....	1400	134	18	10	9.5	4.5	7
9	....	....	....	....	....	1500	122	18	9.8	8	6.5	7
10	....	....	....	....	....	1600	122	23	9.2	7.2	9.5	7
11	....	....	....	....	....	1900	141	15	9.5	6.8	5.5	8
12	....	....	....	....	....	1900	160	13	8	6.4	5.5	8
13	....	....	....	....	....	1800	146	13	7.6	7.2	6	8
14	....	....	....	....	....	1900	134	20	7.6	8	6	8
15	....	....	....	....	....	2800	134	13	8	7.6	6	8
16	....	....	....	....	....	1900	134	13	8.6	8	6	6
17	....	....	....	....	....	1500	111	8.9	8	8	7	6
18	....	....	....	....	....	1050	90	8	7.6	8	9.5	6
19	....	....	....	....	....	880	80	6.4	11	8	9.5	6
20	....	....	....	....	....	860	60	7	7.6	7.8	9.5	6
21	....	....	....	....	....	830	50	6.4	6	8	9.5	6
22	....	....	....	....	....	830	60	10	7.6	8	7	6
23	....	....	....	....	418	830	50	41	8	7.8	7.8	6.4
24	....	....	....	....	520	830	44	36	7.2	7.6	6	6.4
25	....	....	....	....	560	690	29	48	7	8	9.5	6.4
26	....	....	....	....	485	645	26	32	6.8	8	8	6.4
27	....	....	....	....	386	450	18	17	6.8	8	5.5	6.4
28	....	....	....	....	450	307	20	17	7.6	5.5	5	6.4
29	....	....	....	....	600	330	26	16	6.8	4.5	5.6	6.4
30	....	....	....	....	780	485	32	15	8	5.6	6.4	7
31	....	....	....	....	1110	....	40	15	....	5	....	7
Total	....	....	....	....	5309	34222	3649	683.7	280	267.5	205	208
Mean	....	....	....	....	590	1140	118	22.1	9.33	8.63	6.83	6.71
Max	....	....	....	....	9 Days	2800	386	60	23	16	9.5	8
Min	....	....	....	....	....	307	18	6.4	6	4.5	4.5	6
Acre-ft.	....	....	....	....	10500	67800	7260	1360	555	531	406	413

Discharge of Walton Creek near Steamboat Springs for 1922.
Drainage Area, 38 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	8	72	880	64	12	16	....	....	....
2	....	....	....	8	90	880	53	16	8	....	....	....
3	....	....	....	8	100	830	48	14	8	....	....	....
4	....	....	....	8	100	830	40	11	8	....	....	....
5	....	....	....	12	134	935	40	10	11	....	....	....
6	....	....	....	14	190	1110	80	10	7	....	....	....
7	....	....	....	14	206	1180	48	8	7	....	....	....
8	....	....	....	14	206	1240	40	8	7	....	....	....
9	....	....	....	14	206	1320	40	8	7	....	....	....
10	....	....	....	11	174	1110	32	11	6	....	....	....
11	....	....	....	11	134	880	32	16	6	....	....	....
12	....	....	....	11	122	780	32	10	6	....	....	....
13	....	....	....	11	111	690	29	8	6	....	....	....
14	....	....	....	11	100	645	26	10	7	....	....	....
15	....	....	....	11	90	485	23	10	7	....	....	....
16	....	....	....	11	90	386	20	8	7	....	....	....
17	....	....	....	11	134	386	18	10	7	....	....	....
18	....	....	....	8	224	307	18	10	6	....	....	....
19	....	....	....	8	224	242	18	12	6	....	....	....
20	....	....	....	8	263	206	16	11	6	....	....	....
21	....	....	....	12	330	190	16	10	6	....	....	....
22	....	....	....	20	358	174	16	12	6	....	....	....
23	....	....	....	26	485	160	14	14	6	....	....	....
24	....	....	....	36	690	134	12	12	6	....	....	....
25	....	....	....	40	780	111	12	11	6	....	....	....
26	....	....	8	44	880	90	12	11	6	....	....	....
27	....	....	8	48	1050	80	12	10	6	....	....	....
28	....	....	8	58	1240	64	18	8	8	....	....	....
29	....	....	8	72	1240	80	20	8	10	....	....	....
30	....	....	8	80	1050	90	14	8	10	....	....	....
31	....	....	8	....	935	....	11	8	....	....	....	....
Total	....	....	48	648	12008	16495	874	325	219	....	....	....
Mean	....	....	8	21.6	387	550	28.2	10.5	7.3	....	....	....
Max	....	....	....	80	1240	1320	80	16	16	....	....	....
Min	....	....	....	8	72	64	11	8	6	....	....	....
Acre-ft.	....	....	95	1290	23800	32700	17300	646	434	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Elk River near Clark for 1921.

Drainage Area, 206 Square Miles. Altitude, 7,300 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1						3250	1700					
2						3100	1650					
3						3100	1230					
4						3290	1050					
5						3250	1050					
6						3670	955					
7						3820	910					
8						3580	820					
9						3530	777					
10						3620	820	180				
11						3530	777					
12						3720	910					
13						3620	820					
14						3620	777					
15						3870	734					
16						3250	777					
17						2960	694					
18						2160	865					
19						1930	734					
20						1840	580					
21						1790	512					
22						1740	580					
23						1700	512					
24					3060	1700	512					
25					2400	1790	546					
26					2540	1840	481					
27					2870	1740	396					
28					3250	1740	373					
29					3530	1740	350					
30					3480	1700	310					
31					3480		310					
Total						82190	23512					
Mean						2740	758					
Max						3870	1700					
Min						1700	310					
Acre-ft.						163000	46600					

Discharge of Elk Creek near Clark for 1922.

Drainage Area, 206 Square Miles. Altitude, 7,300 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1					300	2870	872	170	55			
2					350	1840	789	143	55			
3					450	1840	789	130	55			
4					600	1740	708	143	55			
5					900	2210	748	143	46			
6					900	2020	748	130	46			
7					1090	2450	668	119	46			
8					1000	2210	668	119	46			
9					590	3530	518	119	46			
10					350	3150	454	119	46			
11					350	2490	350	143	46			
12					276	2070	330	143	46			
13					330	1790	293	119	46			
14					293	1790	310	119	46			
15					276	1740	293	119	46			
16					330	1650	293	98	46			
17					872	1700	244	108	46			
18					1460	1700	229	119	46			
19					1790	1840	244	119	46			
20					1980	1880	229	98	46			
21					1980	1880	199	108	46			
22					1840	1880	199	119	46			
23					1840	1880	199	108	46			
24					2350	1550	199	98	46			
25					2590	1650	184	98	46			
26					3200	1700	156	98	46			
27					3430	1460	170	80	46			
28					2920	1230	184	66	46			
29					3290	1140	156	66	46			
30					3150	957	143	66	46			
31					3340		143	66				
Total					44417	57837	11709	3493	1416			
Mean					1430	1930	378	113	47.2			
Max					3430	3530	872	170	55			
Min					276	957	143	66	46			
Acre-ft.					87900	115000	23200	6950	2810			

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Elk River near Trull for 1921.

Drainage Area, 415 Square Miles. Altitude, 6,650 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	114	....	....	550	1100	3960	1860	382	116	79	77	....
2	....	....	....	550	1590	3710	1800	310	72	73	77	....
3	....	....	....	559	2320	3620	1440	233	73	68	73	....
4	....	....	....	655	2820	3710	1340	259	106	64	68	....
5	....	....	....	763	3280	4300	1260	291	150	64	67	....
6	....	....	....	435	3880	4730	1060	331	135	64	65	....
7	....	....	....	490	3620	4560	1060	378	123	64	65	....
8	....	....	....	490	2740	4220	990	256	118	64	64	....
9	....	....	....	435	2320	4220	920	230	111	68	61	....
10	....	138	....	467	2050	4140	887	331	104	70	58	....
11	....	....	....	630	2050	4140	920	276	104	65	64	....
12	....	....	....	734	2120	4390	955	236	100	72	68	....
13	....	....	....	763	2390	4560	854	218	96	77	65	....
14	....	....	....	920	2600	4730	823	221	92	77	65	....
15	....	....	178	792	3040	5350	729	175	86	77	70	....
16	....	....	....	655	3460	4390	823	140	82	77	68	....
17	....	....	....	707	3800	3880	734	113	82	77	65	....
18	....	....	....	734	3880	3370	680	96	86	77	62	....
19	....	....	....	955	3370	2600	583	189	92	73	72	....
20	....	....	....	1030	2530	2050	630	186	86	72	82	....
21	....	....	....	854	2670	1920	680	183	82	65	94	....
22	....	....	....	763	3040	2050	680	180	77	65	106	....
23	....	....	....	955	3540	2180	707	177	75	65	106	....
24	....	....	....	1100	3960	2250	655	175	70	64	111	....
25	....	....	....	887	3800	2320	630	172	73	73	116	....
26	....	....	....	763	3620	2250	583	169	82	72	125	....
27	....	....	....	680	3710	2320	536	152	82	77	130	....
28	....	....	....	707	4300	2250	467	130	81	82	130	....
29	....	....	....	734	4480	2180	435	130	79	82	130	....
30	....	....	....	792	4480	1980	387	128	77	82	130	....
31	....	....	....	....	4220	....	374	123	....	79	....	....
Total	....	....	....	21549	96780	102330	26482	6570	2792	2228	2534	....
Mean	120	145	275	718	3120	3410	854	212	93.1	71.9	84.5	....
Max	....	....	....	1100	4480	5350	1860	382	150	82	130	....
Min	....	....	....	435	1100	1920	374	96	70	64	58	....
Acre-ft.	7380	8050	16900	42700	192000	203000	52500	13000	5540	4420	5030	....

Discharge of Elk River near Trull for 1922.

Drainage Area, 415 Square Miles. Altitude, 6,650 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	300	1140	2460	1030	186	109	....	....	....
2	....	....	....	300	1220	2320	920	210	114	....	....	....
3	....	....	....	300	1340	2320	792	192	103	....	....	....
4	....	....	....	300	1390	2180	734	173	100	....	....	....
5	....	....	....	300	1540	2460	707	161	92	....	....	....
6	....	....	....	300	1860	2670	734	149	92	....	....	....
7	....	....	....	300	2180	2670	707	134	89	....	....	....
8	....	....	....	332	2180	3200	582	127	82	....	....	....
9	....	....	....	308	2390	3280	513	119	78	....	....	....
10	....	....	....	236	1800	3460	467	123	78	....	....	....
11	....	....	....	210	1340	2960	409	161	76	....	....	....
12	93	....	....	198	1220	2670	352	143	75	....	....	....
13	....	....	....	180	1220	2890	320	121	73	....	....	....
14	....	....	....	189	1220	2890	304	119	72	....	....	....
15	....	....	....	198	1030	2460	288	116	70	....	....	....
16	....	....	....	204	1060	1800	304	112	70	....	....	....
17	....	....	....	242	1300	1860	284	114	62	....	....	....
18	....	131	....	292	1980	2180	269	119	60	....	....	....
19	....	....	....	324	2180	2250	261	119	61	....	....	....
20	....	....	....	332	2250	2320	269	121	58	....	....	....
21	....	....	....	344	2670	2250	261	143	57	....	....	....
22	....	....	....	400	2600	2250	242	149	57	....	....	....
23	....	....	....	490	2820	2180	250	132	55	....	....	....
24	....	....	....	763	3040	1860	232	116	52	....	....	....
25	....	....	....	792	3370	1740	210	112	50	....	....	....
26	....	....	....	920	3370	1540	198	107	50	....	....	....
27	....	....	....	920	3710	1340	186	103	51	....	....	....
28	....	....	....	1030	3710	1300	180	98	58	....	....	....
29	....	....	....	1140	3800	1180	189	96	65	....	....	....
30	....	....	....	1140	3540	1220	168	96	96	....	....	....
31	....	....	....	....	2890	....	163	94	....	....	....	....
Total	....	....	....	13284	72360	68160	12525	4065	2205	....	....	....
Mean	100	130	180	443	2330	2270	404	131	73.5	....	....	....
Max	....	....	....	1140	3800	3460	1030	210	114	....	....	....
Min	....	....	....	180	1030	1180	163	94	50	....	....	....
Acre-ft.	6150	7220	11100	26400	143000	135000	24800	8060	4370	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Williams River at Hamilton for 1921.

Drainage Area, 341 Square Miles. Altitude, 6,400 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	66	....	57	57	88	1330	403	139	80	33	20	....
2	....	....	33	72	168	1290	373	130	64	20	20	....
3	....	....	28	88	228	1200	313	112	57	20	20	....
4	....	....	33	72	373	1120	328	96	50	20	20	....
5	....	....	50	72	574	1460	418	72	44	20	20	....
6	....	....	57	72	732	1330	328	64	38	20	20	....
7	....	....	28	50	845	1560	258	64	38	20	20	....
8	....	....	18	57	558	1600	218	64	38	20	20	....
9	....	....	20	50	403	1310	198	50	38	24	20	....
10	....	....	15	28	343	1270	208	50	33	24	20	....
11	....	....	44	18	238	1270	188	50	28	24	20	....
12	....	....	50	15	248	1460	178	57	28	24	20	....
13	....	....	64	20	494	1460	198	44	28	24	20	....
14	....	....	44	28	750	1240	168	72	28	24	20	....
15	....	....	50	20	1410	1620	283	80	24	24	20	....
16	....	....	44	20	1350	1640	238	64	20	28	20	....
17	....	....	33	33	1750	1200	198	50	20	28	20	....
18	54	....	28	44	1330	1140	168	38	28	24	20	....
19	....	....	44	44	1000	921	198	50	28	24	20	....
20	....	....	33	64	769	845	148	44	28	24	20	....
21	....	....	38	80	1040	714	148	64	28	20	20	....
22	....	....	33	72	1290	608	148	57	28	20	20	....
23	....	....	28	57	1540	660	168	112	28	20	20	....
24	....	....	57	64	1660	591	139	104	28	20	20	....
25	....	....	88	80	1600	558	112	80	28	20	20	....
26	....	....	72	88	1350	574	112	57	28	20	20	....
27	....	....	64	72	1240	574	112	50	28	20	20	....
28	....	....	72	28	1560	510	96	50	28	20	20	....
29	....	....	96	18	1690	478	96	44	28	20	20	....
30	....	....	57	28	1730	403	88	44	28	20	20	....
31	....	....	38	....	1520	....	80	80	....	20	....	....
Total	....	....	1416	1511	29871	31936	6309	2132	1020	689	600	....
Mean	53	46	45.7	50.4	964	1060	204	68.8	34.0	22.2	20.0	28.0
Max	....	....	96	88	1750	1640	418	139	80	33	20	....
Min	....	....	15	15	88	403	80	38	20	20	20	....
Acre-ft.	3260	2550	2810	3000	59300	63000	12500	4230	2020	1360	1190	1720

Discharge of Williams River at Hamilton's for 1922.

Drainage Area, 341 Square Miles. Altitude, 6,400 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	104	306	845	221	80	28	....	....	....
2	....	....	....	104	332	788	199	72	28	....	....	....
3	....	....	....	72	360	750	168	50	24	....	....	....
4	....	....	....	72	374	750	158	50	20	....	....	....
5	....	....	....	104	463	732	158	50	20	....	....	....
6	....	....	....	112	807	921	148	50	20	....	....	....
7	....	....	....	64	750	807	139	50	18	....	....	....
8	....	....	....	64	788	1060	139	38	18	....	....	....
9	....	....	....	88	696	1020	112	38	15	....	....	....
10	....	....	....	80	625	1020	104	57	15	....	....	....
11	....	....	....	50	574	980	104	44	15	....	....	....
12	....	....	....	57	374	1000	96	38	15	....	....	....
13	....	....	....	72	388	883	88	28	15	....	....	....
14	....	....	....	57	388	864	88	28	15	....	....	....
15	....	....	....	33	403	769	80	28	15	....	....	....
16	....	....	....	33	433	678	80	28	15	....	....	....
17	....	....	....	33	510	642	80	28	20	....	....	....
18	....	....	....	33	864	510	80	28	20	....	....	....
19	....	....	....	33	883	510	64	28	20	....	....	....
20	....	....	....	44	921	526	57	28	20	....	....	....
21	....	....	....	50	1220	510	50	28	20	....	....	....
22	....	....	....	96	1160	463	50	28	20	....	....	....
23	....	....	....	130	1310	418	50	28	24	....	....	....
24	....	....	....	139	1330	374	50	44	28	....	....	....
25	....	....	....	148	1350	319	50	38	28	....	....	....
26	....	....	....	188	1540	280	50	28	28	....	....	....
27	....	....	....	158	1410	268	38	28	28	....	....	....
28	....	....	....	199	1450	256	38	28	28	....	....	....
29	....	....	....	244	1390	244	44	28	28	....	....	....
30	....	....	....	306	1140	232	50	33	28	....	....	....
31	....	....	....	....	1000	....	50	44	....	....	....	....
Total	....	....	....	2967	25539	19419	2883	1196	636	....	....	....
Mean	....	....	....	98.9	824	647	93	38.6	21.2	....	....	....
Max	....	....	....	306	1540	1060	221	80	80	....	....	....
Min	....	....	....	33	306	232	38	28	15	....	....	....
Acre-ft.	....	....	....	5880	50700	38500	5720	2370	1260	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Middle Fork of Little Snake River at Gardner's Ranch for 1921.
Drainage Area, 152 Square Miles. Altitude, 7,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	30	46	1520	88	17	28	8	14	....
2	....	....	....	40	100	1310	70	17	14	8	14	....
3	....	....	....	46	234	1280	66	16	10	7	9	....
4	....	....	....	46	416	1250	62	15	14	8	8	....
5	....	....	....	36	486	1450	58	14	14	8	8	....
6	....	....	....	28	614	1910	56	14	10	7	9	....
7	....	....	....	20	526	1910	52	17	8	8	10	....
8	....	....	....	20	264	1520	53	14	8	8	9	....
9	....	....	....	20	198	1280	54	14	10	8	8	....
10	....	....	....	20	222	1310	55	52	10	7	7	....
11	....	....	....	28	486	1220	56	20	8	7	6	....
12	....	....	....	36	570	1160	57	17	7	7	6	....
13	....	....	....	24	658	984	58	14	8	7	6	....
14	....	....	....	28	776	850	60	28	7	8	6	....
15	....	....	....	20	956	769	62	32	8	8	6	....
16	....	....	....	20	1310	688	64	14	8	7	6	....
17	....	....	....	24	1670	607	66	14	8	7	6	....
18	....	....	....	20	1560	526	68	12	8	7	6	....
19	....	....	....	28	1100	433	70	10	8	7	6	....
20	....	....	....	20	776	341	63	12	8	7	6	....
21	....	....	....	17	1070	249	56	14	8	8	6	....
22	....	....	....	20	1310	243	49	10	8	8	6	....
23	....	....	....	28	1450	236	42	14	8	7	7	....
24	....	....	....	28	1520	229	35	14	8	7	7	....
25	....	....	....	20	1520	222	28	14	7	9	6	....
26	....	....	....	14	1560	202	27	10	7	8	6	....
27	....	....	....	10	2380	182	25	9	8	10	6	....
28	....	....	....	10	2250	162	23	8	8	10	7	....
29	....	....	....	8	2160	142	21	8	7	12	8	....
30	....	....	....	17	2070	124	19	14	8	14	7	....
31	....	....	....	....	1750	....	17	14	....	14	....	....
Total	....	....	....	734	32008	24309	1580	492	281	256	222	....
Mean	....	....	....	24.5	1030	810	51.0	15.9	9.37	8.26	7.40	....
Max	....	....	....	46	2380	1910	88	52	28	14	14	....
Min	....	....	....	8	46	124	17	8	7	7	6	....
Acre-ft.	....	....	....	1460	63300	48200	3140	978	558	508	440	....

Discharge of Middle Fork of Little Snake River at Gardner's Ranch for 1922.
Drainage Area, 152 Square Miles. Altitude, 7,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	260	800	55	18	15	....	....	....
2	....	....	....	....	288	774	46	18	8	....	....	....
3	....	....	....	....	350	748	39	15	7	....	....	....
4	....	....	....	....	350	724	36	12	7	....	....	....
5	....	....	....	....	384	854	36	24	6	....	....	....
6	....	....	....	....	456	827	33	30	8	....	....	....
7	....	....	....	....	494	748	30	24	7	....	....	....
8	....	....	....	....	494	827	30	21	6	....	....	....
9	....	....	....	....	384	854	21	18	6	....	....	....
10	....	....	....	....	318	774	24	18	6	....	....	....
11	....	....	....	....	288	654	21	21	6	....	....	....
12	....	....	....	....	260	570	15	21	6	....	....	....
13	....	....	....	....	260	513	12	18	7	....	....	....
14	....	....	....	....	274	456	8	21	5	....	....	....
15	....	....	....	....	318	350	6	18	5	....	....	....
16	....	....	....	....	384	288	7	12	5	....	....	....
17	....	....	....	....	494	274	6	10	4	....	....	....
18	....	....	....	....	570	247	7	18	4	....	....	....
19	....	....	....	....	748	234	6	24	4	....	....	....
20	....	....	....	....	854	210	6	12	4	....	....	....
21	....	....	....	....	1080	186	10	12	4	....	....	....
22	....	....	....	....	1200	162	7	15	5	....	....	....
23	....	....	....	....	1200	151	6	12	5	....	....	....
24	....	....	....	....	1250	130	6	10	5	....	....	....
25	....	....	....	....	1310	111	6	10	6	....	....	....
26	....	....	....	....	1250	86	6	8	6	....	....	....
27	....	....	....	....	1200	72	10	8	7	....	....	....
28	....	....	....	....	1310	66	12	7	10	....	....	....
29	....	....	....	....	1430	60	18	6	6	....	....	....
30	....	....	....	....	1310	60	18	7	6	....	....	....
31	....	....	....	....	1050	....	18	7	....	....	....	....
Total	....	....	....	....	21818	12810	561	475	186	....	....	....
Mean	....	....	....	....	704	427	18.1	15.3	6.2	....	....	....
Max	....	....	....	....	1430	854	55	30	15	....	....	....
Min	....	....	....	....	260	60	6	6	4	....	....	....
Acre-ft.	....	....	....	....	43300	25400	1110	941	369	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second

Discharge of South Fork of Little Snake River at Fleming's for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	24	116	13	4	4	....	....	....
2	....	....	....	....	26	108	10	4	3	....	....	....
3	....	....	....	....	32	140	9	4	6	....	....	....
4	....	....	....	....	49	108	8	4	4	....	....	....
5	....	....	....	....	61	165	9	3	2	....	....	....
6	....	....	....	....	70	140	12	2	2	....	....	....
7	....	....	....	....	82	116	12	2	2	....	....	....
8	....	....	....	9	82	108	10	2	1	....	....	....
9	....	....	....	9	70	124	10	2	1	....	....	....
10	....	....	....	9	51	108	11	2	1	....	....	....
11	....	....	....	10	36	94	10	3	1	....	....	....
12	....	....	....	10	34	76	9	4	2	....	....	....
13	....	....	....	10	40	64	8	3	1	....	....	....
14	....	....	....	10	44	64	7	3	1	....	....	....
15	....	....	....	9	49	49	7	2	1	....	....	....
16	....	....	....	7	54	44	8	3	1	....	....	....
17	....	....	....	7	82	44	8	3	1	....	....	....
18	....	....	....	7	108	44	8	3	1	....	....	....
19	....	....	....	6	108	32	9	3	1	....	....	....
20	....	....	....	4	124	32	9	3	1	....	....	....
21	....	....	....	3	156	29	10	3	2	....	....	....
22	....	....	....	3	174	30	8	3	2	....	....	....
23	....	....	....	6	174	28	6	5	4	....	....	....
24	....	....	....	7	196	29	5	2	3	....	....	....
25	....	....	....	10	218	23	4	2	2	....	....	....
26	....	....	....	12	240	21	4	2	2	....	....	....
27	....	....	....	15	218	19	5	1	2	....	....	....
28	....	....	....	19	196	18	7	2	2	....	....	....
29	....	....	....	22	240	20	8	2	2	....	....	....
30	....	....	....	24	165	18	6	4	2	....	....	....
31	....	....	....	....	156	....	4	6	....	....	....	....
Total	....	....	....	228	3359	2051	254	91	60	....	....	....
Mean	....	....	....	9.9	108	68.4	8.19	2.94	2.00	....	....	....
Max	....	....	....	....	240	165	13	6	6	....	....	....
Min	....	....	....	....	24	18	4	1	1	....	....	....
Acre-ft.	....	....	....	452	6640	4070	503	181	119	....	....	....

Discharge of Slater Creek at Baxters Ranch for 1922.

Drainage Area, 80 Square Miles. Altitude, 7,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	330	451	84	18	12	....	....	....
2	....	....	....	....	362	432	84	24	12	....	....	....
3	....	....	....	....	330	432	80	28	10	....	....	....
4	....	....	....	....	346	451	80	18	10	....	....	....
5	....	....	....	....	379	451	80	18	10	....	....	....
6	....	....	....	....	414	432	62	18	10	....	....	....
7	....	....	....	....	432	451	46	18	12	....	....	....
8	....	....	....	....	451	470	62	18	12	....	....	....
9	....	....	....	....	432	510	62	18	10	....	....	....
10	....	....	....	....	362	470	62	17	8	....	....	....
11	....	....	....	....	275	432	46	17	8	....	....	....
12	....	....	....	....	275	414	46	16	7	....	....	....
13	....	....	....	....	288	396	21	15	7	....	....	....
14	....	....	....	....	275	379	32	15	7	....	....	....
15	....	....	....	....	288	330	28	14	7	....	....	....
16	....	....	....	....	346	315	46	14	7	....	....	....
17	....	....	....	....	451	330	39	16	8	....	....	....
18	....	....	....	....	510	330	39	16	8	....	....	....
19	....	....	....	....	570	330	39	16	7	....	....	....
20	....	....	....	....	550	300	39	16	7	....	....	....
21	....	....	....	....	550	315	32	14	6	....	....	....
22	....	....	....	154	550	288	39	14	7	....	....	....
23	....	....	....	154	570	250	32	14	7	....	....	....
24	....	....	....	176	610	212	32	14	8	....	....	....
25	....	....	....	176	630	200	32	16	8	....	....	....
26	....	....	....	195	650	176	32	16	8	....	....	....
27	....	....	....	225	590	165	24	14	8	....	....	....
28	....	....	....	238	570	146	24	14	9	....	....	....
29	....	....	....	275	570	125	24	14	9	....	....	....
30	....	....	....	315	530	98	21	14	8	....	....	....
31	....	....	....	....	510	....	21	14	....	....	....	....
Total	....	....	....	1908	13996	10081	1390	508	257	....	....	....
Mean	....	....	....	212	451	336	44.8	16.4	8.57	....	....	....
Max	....	....	....	....	650	510	84	28	12	....	....	....
Min	....	....	....	....	275	98	21	14	6	....	....	....
Acre-ft.	....	....	....	3780	27700	20000	2750	1010	510	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork of Slater Creek Near Baxter's Ranch for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	28	60	8	0	2	....	....	....
2	....	....	....	....	38	76	8	0	2	....	....	....
3	....	....	....	....	28	116	8	0	2	....	....	....
4	....	....	....	....	38	140	8	0	3	....	....	....
5	....	....	....	....	54	140	5	0	2	....	....	....
6	....	....	....	....	54	140	4	0	2	....	....	....
7	....	....	....	....	60	153	2	0	2	....	....	....
8	....	....	....	....	68	166	2	0	2	....	....	....
9	....	....	....	....	68	196	1	0	3	....	....	....
10	....	....	....	....	48	140	0	0	2	....	....	....
11	....	....	....	....	38	116	0	0	2	....	....	....
12	....	....	....	....	38	116	0	0	3	....	....	....
13	....	....	....	....	43	116	0	0	3	....	....	....
14	....	....	....	....	38	105	0	0	3	....	....	....
15	....	....	....	....	38	94	0	0	2	....	....	....
16	....	....	....	....	28	85	0	1	2	....	....	....
17	....	....	....	....	38	76	0	1	2	....	....	....
18	....	....	....	....	48	85	0	1	2	....	....	....
19	....	....	....	....	68	94	0	1	2	....	....	....
20	....	....	....	....	60	94	0	2	2	....	....	....
21	....	....	....	....	60	76	0	2	3	....	....	....
22	....	....	....	....	60	76	0	2	4	....	....	....
23	....	....	....	....	68	60	0	0	4	....	....	....
24	....	....	....	....	76	38	0	0	5	....	....	....
25	....	....	....	....	85	20	0	0	5	....	....	....
26	....	....	....	....	85	20	0	0	4	....	....	....
27	....	....	....	....	94	17	0	0	4	....	....	....
28	....	....	....	....	85	14	0	0	4	....	....	....
29	....	....	....	....	85	14	0	0	4	....	....	....
30	....	....	....	....	60	14	0	0	4	....	....	....
31	....	....	....	....	54	....	0	0	....	....	....	....
Total	....	....	....	....	1733	2657	46	10	86	....	....	....
Mean	....	....	....	....	55.9	88.6	1.48	0.32	2.87	....	....	....
Max	....	....	....	....	94	196	8	2	5	....	....	....
Min	....	....	....	....	28	14	0	0	2	....	....	....
Acre-ft.	....	....	....	....	3440	5270	91	20	171	....	....	....

Discharge of Savery Creek at Savery, Wyo., for 1921.
Drainage Area, 354 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	328	292	1300	84	56	18	18	40	....
2	....	....	....	622	382	1300	69	69	32	18	40	....
3	....	....	....	622	976	952	62	108	32	18	40	....
4	....	....	....	622	1100	952	62	133	36	18	40	....
5	....	....	....	584	1300	904	62	142	40	13	40	....
6	....	....	....	527	1590	860	62	152	32	13	40	....
7	....	....	....	328	1710	820	62	274	32	13	40	....
8	....	....	....	188	860	760	62	220	32	13	40	....
9	....	....	....	188	860	740	62	152	32	13	32	....
10	....	....	....	188	1050	720	62	124	32	13	32	....
11	....	....	....	188	1300	660	62	124	32	13	32	....
12	....	....	....	188	1410	660	92	124	40	9	32	....
13	....	....	....	238	1410	660	62	142	18	9	32	....
14	....	....	....	256	1410	641	62	62	18	9	40	....
15	....	....	....	292	1410	622	62	62	18	9	50	....
16	....	....	....	400	1500	546	62	62	18	9	32	....
17	....	....	....	400	1590	490	76	62	18	9	32	....
18	....	....	....	400	1590	400	69	62	18	24	32	....
19	....	....	....	400	1470	292	62	56	18	24	32	....
20	....	....	....	400	1470	292	50	32	18	32	32	....
21	....	....	....	436	1440	274	50	32	18	40	32	....
22	....	....	....	472	1590	256	50	24	18	40	32	....
23	....	....	....	400	1590	188	45	24	18	40	32	....
24	....	....	204	292	1470	152	40	24	18	40	32	....
25	....	....	220	292	1470	142	24	21	18	40	32	....
26	....	....	188	292	1410	142	18	18	18	40	32	....
27	....	....	188	292	1150	142	18	18	18	40	32	....
28	....	....	188	256	952	162	18	18	18	40	32	....
29	....	....	188	256	952	124	18	18	18	40	32	....
30	....	....	188	292	952	116	18	18	18	40	32	....
31	....	....	188	....	860	....	18	18	....	40	....	....
Total	....	....	1552	10639	38516	16269	1625	2451	714	737	1050	....
Mean	....	....	194	355	1240	542	52.4	79.1	23.8	23.8	35.0	....
Max	....	....	....	622	1590	1300	92	274	40	40	50	....
Min	....	....	8 Days	188	292	116	18	18	18	9	32	....
Acre-ft.	....	....	3080	21100	76200	32300	3220	4860	1420	1460	2080	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Savery Creek at Savery, Wyo., for 1922.

Drainage Area, 354 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	124	616	508	76	18	50	....	....	....
2	....	....	....	62	616	508	76	18	50	....	....	....
3	....	....	....	124	671	508	76	13	50	....	....	....
4	....	....	....	124	768	508	69	16	50	....	....	....
5	....	....	....	124	854	508	62	16	50	....	....	....
6	....	....	....	142	854	400	62	13	50	....	....	....
7	....	....	....	175	900	400	62	9	50	....	....	....
8	....	....	....	220	994	400	62	9	40	....	....	....
9	....	....	....	220	994	400	62	13	40	....	....	....
10	....	....	....	220	900	400	50	13	40	....	....	....
11	....	....	....	220	994	400	45	13	18	....	....	....
12	....	....	....	124	854	400	40	13	18	....	....	....
13	....	....	....	124	854	400	36	11	18	....	....	....
14	....	....	....	92	768	328	32	9	18	....	....	....
15	....	....	....	62	768	292	32	9	18	....	....	....
16	....	....	....	124	810	256	32	9	18	....	....	....
17	....	....	....	124	728	188	28	9	18	....	....	....
18	....	....	....	124	728	188	28	9	18	....	....	....
19	....	....	472	124	709	188	28	13	18	....	....	....
20	....	....	472	124	690	175	24	13	24	....	....	....
21	....	....	472	124	690	162	24	13	24	....	....	....
22	....	....	580	142	728	162	28	13	24	....	....	....
23	....	....	490	152	728	92	28	13	24	....	....	....
24	....	....	472	220	748	84	24	13	24	....	....	....
25	....	....	472	472	728	76	18	13	24	....	....	....
26	....	....	472	472	690	76	18	13	24	....	....	....
27	....	....	418	472	728	76	18	50	24	....	....	....
28	....	....	346	472	690	76	18	50	24	....	....	....
29	....	....	124	472	690	76	13	50	40	....	....	....
30	....	....	124	472	690	76	13	50	40	....	....	....
31	....	....	124	....	690	....	13	50	....	....	....	....
Total	....	....	5038	6247	23870	8311	1197	574	928	....	....	....
Mean	....	....	388	208	770	277	38.6	18.5	30.9	....	....	....
Max	....	....	....	472	994	508	76	50	50	....	....	....
Min	....	....	....	62	616	76	13	9	18	....	....	....
Acre-ft.	....	....	9990	12400	47300	16500	2370	1140	1840	....	....	....

Discharge of Little Snake River at Dixon, Wyo., for 1921.

Drainage Area, 1,294 Square Miles. Altitude, 6,300 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	251	1290	5260	908	115	38	46	54	....
2	....	....	....	352	2060	4960	780	162	46	38	54	....
3	....	....	....	466	2660	4540	667	130	54	41	54	....
4	....	....	....	978	3350	4580	578	115	54	46	54	....
5	....	....	....	1090	4280	4810	500	87	87	51	54	....
6	....	....	....	538	5110	5110	419	74	54	87	54	....
7	....	....	....	374	5260	5590	361	70	54	136	54	....
8	....	....	....	290	3280	5340	318	58	51	136	46	....
9	....	....	....	251	2680	5410	302	64	46	156	38	....
10	....	....	....	251	2560	5180	278	203	46	162	38	....
11	....	....	....	466	2710	6280	240	124	51	169	38	....
12	....	....	....	563	3070	5410	162	79	51	146	51	....
13	....	....	....	528	3600	4880	270	58	38	115	58	....
14	....	....	....	694	3980	5110	270	146	38	100	64	....
15	....	....	....	640	4390	4660	251	87	27	79	64	....
16	....	....	....	466	4960	4280	270	106	24	54	70	....
17	....	....	....	442	6040	3600	240	70	27	54	74	....
18	....	....	....	500	6200	2940	240	54	38	54	64	....
19	....	....	....	722	5800	2490	251	24	27	54	64	....
20	....	....	....	762	5720	1820	203	22	51	51	70	....
21	....	....	....	667	4880	1560	169	54	46	38	64	....
22	....	....	....	548	5340	1580	136	54	51	38	64	....
23	....	....	....	667	5410	1510	146	54	54	38	70	....
24	....	....	....	780	5640	1490	115	54	51	38	70	....
25	....	....	....	722	5560	1420	87	58	54	46	64	....
26	....	....	....	614	4960	1400	64	51	58	46	54	....
27	....	....	....	588	5690	1320	70	41	51	46	54	....
28	....	....	....	640	6170	1210	58	38	51	51	54	....
29	....	....	....	651	6680	1050	70	38	54	54	58	....
30	....	....	....	780	6490	1010	64	38	54	54	64	....
31	....	....	....	....	5690	....	54	38	....	54	....	....
Total	....	....	....	17281	141510	105800	8541	2366	1426	2278	1733	....
Mean	....	....	....	576	4560	3530	275	76.3	47.5	73.5	57.8	....
Max	....	....	....	1090	6680	6280	908	203	87	169	74	....
Min	....	....	....	251	1290	1010	54	22	24	38	38	....
Acre-ft.	....	....	....	34300	280000	210000	16900	4690	2830	4520	3440	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Little Snake River at Dixon, Wyo., for 1922.

Drainage Area, 1,294 Square Miles. Altitude, 6,300 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	181	1820	3280	233	24	28	....	....	....
2	....	....	....	196	1600	3070	176	24	28	....	....	....
3	....	....	....	254	2000	2940	162	24	28	....	....	....
4	....	....	....	299	2060	2940	140	23	28	....	....	....
5	....	....	....	444	2490	2940	140	22	28	....	....	....
6	....	....	....	490	2810	2880	108	22	28	....	....	....
7	....	....	....	318	3630	2810	103	22	28	....	....	....
8	....	....	....	326	3630	3070	80	22	28	....	....	....
9	....	....	....	318	2810	2940	64	23	28	....	....	....
10	....	....	....	310	2250	2940	64	24	26	....	....	....
11	....	....	....	274	2740	2740	64	24	26	....	....	....
12	....	....	....	274	1420	2610	64	24	26	....	....	....
13	....	....	....	233	1340	2310	64	24	26	....	....	....
14	....	....	....	218	1510	2000	61	24	24	....	....	....
15	....	....	....	204	1700	1650	57	24	24	....	....	....
16	....	....	....	190	2060	1340	50	24	24	....	....	....
17	....	....	....	184	2680	1290	50	24	24	....	....	....
18	....	....	....	196	3490	1210	48	24	24	....	....	....
19	....	....	....	176	4060	1250	40	25	24	....	....	....
20	....	....	....	233	4440	1210	40	108	24	....	....	....
21	....	....	....	299	4660	1010	35	103	24	....	....	....
22	....	....	780	435	4210	978	31	68	24	....	....	....
23	....	....	780	694	4060	842	28	45	24	....	....	....
24	....	....	810	810	4360	722	28	40	24	....	....	....
25	....	....	307	810	4580	588	28	33	24	....	....	....
26	....	....	288	1010	4810	467	28	27	24	....	....	....
27	....	....	338	1010	5110	379	26	26	24	....	....	....
28	....	....	233	1170	4660	318	26	26	24	....	....	....
29	....	....	218	1420	4810	288	24	26	24	....	....	....
30	....	....	204	1700	4510	274	24	26	34	....	....	....
31	....	....	184	....	3770	....	24	26	....	....	....	....
Total	....	....	4142	14679	100080	53305	2110	1001	774	....	....	....
Mean	....	....	41.4	489	3230	1780	68.1	32.3	25.8	....	....	....
Max	....	....	....	1700	5110	3280	233	108	34	....	....	....
Min	....	....	....	184	3140	274	24	22	24	....	....	....
Acre-ft.	....	....	8210	29100	199000	106000	4190	1990	1540	....	....	....

Discharge of Four Mile Creek at Ranger Station for 1921.

Drainage Area, 4 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	19	25	19	1.7	1.4	1.4	1.4	....
2	....	....	....	....	23	23	11	1.7	1.4	1.4	1.4	....
3	....	....	....	....	21	25	9.5	1.4	1.4	1.4	1.4	....
4	....	....	....	....	19	25	5.4	1.4	1.2	1.4	1.4	....
5	....	....	....	....	19	21	5.4	1.2	1.2	1.2	1.4	....
6	....	....	....	....	19	21	4.4	1.4	1.2	1.2	1.4	....
7	....	....	....	....	15	25	3.4	1.4	1.2	1.2	1.4	....
8	....	....	....	....	13	23	3.4	1.4	1.2	1.2	1.4	....
9	....	....	....	....	15	23	2.0	1.4	1.2	1.0	1.4	....
10	....	....	....	....	17	25	1.7	1.2	1.2	1.0	1.4	....
11	....	....	....	8.	17	25	1.7	1.2	1.2	1.2	1.4	....
12	....	....	....	8	17	25	1.7	1.4	1.4	1.2	1.4	....
13	....	....	....	8	19	25	2.0	1.7	1.7	1.0	1.4	....
14	....	....	....	8	21	25	1.7	1.7	1.7	1.0	1.5	....
15	....	....	....	8	19	23	1.7	1.7	1.7	1.1	1.7	....
16	....	....	....	8	17	21	1.7	1.4	1.7	1.2	2.5	....
17	....	....	....	8	19	21	1.4	1.4	1.7	1.2	2.5	....
18	....	....	....	8	21	23	1.7	1.4	1.7	1.2	1.7	....
19	....	....	....	9.5	19	23	1.7	1.4	2.5	1.2	1.7	....
20	....	....	....	9.5	21	23	1.7	1.4	2.5	1.2	1.8	....
21	....	....	....	9.5	19	23	1.7	1.4	2.5	1.2	1.8	....
22	....	....	....	9.5	21	23	1.4	1.4	2.5	1.2	1.9	....
23	....	....	....	9.5	23	22	1.7	1.4	2.5	1.2	1.9	....
24	....	....	....	9.5	23	21	1.7	1.4	2.5	1.2	2.0	....
25	....	....	....	13	23	20	1.7	1.4	2.5	1.2	2.5	....
26	....	....	....	15	21	19	2.0	1.4	2.5	1.4	2.5	....
27	....	....	....	15	25	19	2.0	1.4	1.7	1.4	1.7	....
28	....	....	....	17	28	19	1.9	1.4	1.4	1.4	1.7	....
29	....	....	....	17	28	17	1.9	1.4	1.4	1.4	2.5	....
30	....	....	....	19	28	15	1.8	1.4	1.4	1.4	2.5	....
31	....	....	....	....	28	....	1.8	1.4	....	1.4	....	....
Total	....	....	....	217	637	668	101.8	44.3	51.3	38.3	52.6	....
Mean	....	....	....	10.9	20.5	22.3	3.28	1.43	1.71	1.24	1.75	....
Max	....	....	....	....	28	25	19	1.7	2.5	1.4	2.5	....
Min	....	....	....	....	13	15	1.4	1.2	1.2	1.0	1.4	....
Acre-ft.	....	....	....	430	1260	1330	202	87.9	102	76.2	104	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Four Mile Creek at Ranger Station for 1922.

Drainage Area, 4 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	11	47	8.6	1.8	0.4	......	......	......
2	......	......	......	......	11	44	8	1.8	0.4	......	......	......
3	......	......	......	......	11	38	8	1.8	0.5	......	......	......
4	......	......	......	......	13	33	8	1.8	0.6	......	......	......
5	......	......	......	......	17	28	8	1.8	0.6	......	......	......
6	......	......	......	......	15	28	8	1.8	0.4	......	......	......
7	......	......	......	......	28	28	8	1.8	0.4	......	......	......
8	......	......	......	......	28	26	8	1.8	0.6	......	......	......
9	......	......	......	......	28	38	8	1.8	0.6	......	......	......
10	......	......	......	......	26	38	7.6	1.3	0.6	......	......	......
11	......	......	......	......	26	28	6.9	0.8	0.6	......	......	......
12	......	......	......	......	30	28	6.5	0.8	0.7	......	......	......
13	......	......	......	......	28	30	6.7	0.8	0.7	......	......	......
14	......	......	......	......	26	28	5.6	0.8	0.7	......	......	......
15	......	......	......	......	28	21	5.2	0.8	0.8	......	......	......
16	......	......	......	......	36	19	4.6	0.8	0.8	......	......	......
17	......	......	......	......	38	14	3.6	0.8	0.6	......	......	......
18	......	......	......	......	36	14	1.8	0.7	0.6	......	......	......
19	......	......	......	......	38	13	1.8	0.7	0.4	......	......	......
20	......	......	......	......	38	13	1.8	0.7	0.4	......	......	......
21	......	......	......	......	38	12	1.8	0.6	0.6	......	......	......
22	......	......	......	......	38	11	1.8	0.6	0.6	......	......	......
23	......	......	......	......	33	11	1.3	0.6	0.7	......	......	......
24	......	......	......	......	38	11	2.2	0.8	0.7	......	......	......
25	......	......	......	......	41	11	1.8	0.8	0.8	......	......	......
26	......	......	......	......	41	11	1.3	0.8	0.8	......	......	......
27	......	......	......	6.7	41	10	1.8	0.8	0.6	......	......	......
28	......	......	......	6.7	50	10	1.8	0.6	0.8	......	......	......
29	......	......	......	6.7	44	10	1.8	0.6	0.8	......	......	......
30	......	......	......	8	53	10	2.7	0.4	0.8	......	......	......
31	......	......	......	......	50	......	1.8	0.4	......	......	......	......
Total	......	......	......	28.1	979	663	144.8	32.2	18.6	......	......	......
Mean	......	......	......	7.02	31.6	22.1	4.67	1.04	0.62	......	......	......
Max	......	......	......	......	53	47	8.6	1.8	0.8	......	......	......
Min	......	......	......	......	11	10	1.8	0.4	0.4	......	......	......
Acre-ft.	......	......	......	56	1940	1320	287	64	37	......	......	......

Discharge of Willow Creek at Ryan's Ranch for 1921.

Drainage Area, 5 Square Miles. Altitude, 8,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	18	50	29	20	8	10	7	......
2	......	......	......	......	24	44	31	16	10	10	7	......
3	......	......	......	......	26	47	31	20	10	10	8	......
4	......	......	......	......	31	53	31	18	8	10	8	......
5	......	......	......	......	34	53	31	14	8	8	9	......
6	......	......	......	......	39	56	31	12	8	7	9	......
7	......	......	......	......	31	56	31	12	10	10	10	......
8	......	......	......	......	22	59	31	14	8	8	10	......
9	......	......	......	......	18	56	31	16	8	8	8	......
10	......	......	......	......	18	56	29	10	10	8	14	......
11	......	......	......	8	20	56	31	12	10	8	8	......
12	......	......	......	8	22	53	29	10	8	16	12	......
13	......	......	......	10	24	53	24	10	8	14	12	......
14	......	......	......	10	31	50	24	8	8	14	18	......
15	......	......	......	10	34	50	22	10	8	10	20	......
16	......	......	......	12	44	50	18	8	8	10	16	......
17	......	......	......	8	50	53	18	8	8	8	18	......
18	......	......	......	10	49	50	22	8	8	7	16	......
19	......	......	......	12	47	44	24	8	7	8	18	......
20	......	......	......	10	45	34	24	8	10	6	16	......
21	......	......	......	7	43	34	29	8	8	6	18	......
22	......	......	......	8	41	39	26	7	8	6	20	......
23	......	......	......	14	39	39	24	8	8	6	18	......
24	......	......	......	12	39	39	24	7	8	6	18	......
25	......	......	......	16	44	40	24	7	9	5	18	......
26	......	......	......	10	39	40	24	8	9	6	17	......
27	......	......	......	8	50	41	24	8	10	5	17	......
28	......	......	......	7	56	41	20	8	10	5	16	......
29	......	......	......	8	59	31	22	7	10	5	16	......
30	......	......	......	12	59	31	20	10	10	6	16	......
31	......	......	......	......	56	......	20	8	......	6	......	......
Total	......	......	......	200	1152	1398	799	328	261	252	418	......
Mean	......	......	......	10.0	37.2	46.6	25.8	10.6	8.7	8.13	13.9	......
Max	......	......	......	......	59	59	31	20	10	16	20	......
Min	......	......	......	......	18	31	18	7	7	5	7	......
Acre-ft.	......	......	......	397	2290	2770	1590	652	518	500	827	......

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Willow Creek at Ryan's Ranch for 1922.
Drainage Area, 5 Square Miles. Altitude, 8,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	....	28	5	3	2	....	....	....
2	....	....	....	....	....	32	4	3	2	....	....	....
3	....	....	....	....	....	44	5	3	2	....	....	....
4	....	....	....	....	....	54	5	3	1.5	....	....	....
5	....	....	....	....	....	54	4	3	1.5	....	....	....
6	....	....	....	....	....	54	3	3	1.5	....	....	....
7	....	....	....	....	....	70	4	4	2	....	....	....
8	....	....	....	....	25	59	4	3	2	....	....	....
9	....	....	....	....	28	59	4	3	2	....	....	....
10	....	....	....	....	16	54	4	4	1	....	....	....
11	....	....	....	....	12	44	4	4	1	....	....	....
12	....	....	....	....	16	44	4	3	1	....	....	....
13	....	....	....	....	14	40	4	3	1	....	....	....
14	....	....	....	....	14	36	4	3	1.5	....	....	....
15	....	....	....	....	10	28	3	3	1.5	....	....	....
16	....	....	....	....	16	28	3	3	2	....	....	....
17	....	....	....	....	14	28	4	3	1.5	....	....	....
18	....	....	....	....	22	28	4	2.5	1.5	....	....	....
19	....	....	....	....	22	28	3	2.5	2	....	....	....
20	....	....	....	....	28	28	3	2.5	2	....	....	....
21	....	....	....	....	28	28	5	2.5	1.5	....	....	....
22	....	....	....	....	28	25	5	2.5	1	....	....	....
23	....	....	....	....	40	19	5	3	1.5	....	....	....
24	....	....	....	....	28	16	4	3	2	....	....	....
25	....	....	....	....	40	14	5	3	2	....	....	....
26	....	....	....	....	44	10	4	3	2.5	....	....	....
27	....	....	....	....	40	8	3	2.5	2.5	....	....	....
28	....	....	....	....	54	10	3	2.5	1	....	....	....
29	....	....	....	....	59	10	3	3	2.5	....	....	....
30	....	....	....	....	59	8	4	2.5	3	....	....	....
31	....	....	....	....	40	....	5	2.5	....	....	....	....
Total	....	....	....	....	697	988	124	91.5	52.0	....	....	....
Mean	....	....	....	....	29.0	32.9	4.0	2.95	1.73	....	....	....
Max	....	....	....	....	....	70	5	4	3	....	....	....
Min	....	....	....	....	....	8	3	2.5	1	....	....	....
Acre-ft.	....	....	....	....	1380	1960	246	181	103	....	....	....

Discharge of Little Snake River Near Lily for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	2400	3980	306	40	20	....	....	....
2	....	....	....	....	2400	3770	236	52	20	....	....	....
3	....	....	....	....	2400	3560	206	40	20	....	....	....
4	....	....	....	....	2400	3350	180	52	20	....	....	....
5	....	....	....	....	2450	3350	156	52	19	....	....	....
6	....	....	....	....	2960	3560	134	52	18	....	....	....
7	....	....	....	....	3560	3350	134	52	17	....	....	....
8	....	....	....	....	4400	3150	114	52	18	....	....	....
9	....	....	....	....	4400	3350	114	46	19	....	....	....
10	....	....	....	....	3980	3350	114	46	20	....	....	....
11	....	....	....	....	2450	3560	114	46	19	....	....	....
12	....	....	....	....	2960	3150	114	46	18	....	....	....
13	....	....	....	....	2160	2960	96	52	17	....	....	....
14	....	....	....	....	2020	2780	114	40	20	....	....	....
15	....	....	....	....	2300	2450	80	40	23	....	....	....
16	....	....	....	....	2450	2160	96	46	26	....	....	....
17	....	....	....	....	2450	1740	96	46	28	....	....	....
18	....	....	....	....	3560	1610	96	28	26	....	....	....
19	....	....	....	....	3980	1480	80	28	24	....	....	....
20	....	....	....	....	4400	1360	80	28	22	....	....	....
21	....	....	....	....	4840	1250	80	114	20	....	....	....
22	....	....	....	....	5360	1080	66	96	19	....	....	....
23	....	....	....	....	4400	1010	66	52	18	....	....	....
24	....	....	....	....	3980	940	66	52	17	....	....	....
25	....	....	....	....	4400	870	66	40	16	....	....	....
26	....	....	....	....	4840	800	66	28	15	....	....	....
27	....	....	....	....	5360	664	66	20	14	....	....	....
28	....	....	....	....	5650	544	66	20	16	....	....	....
29	....	....	....	....	5090	438	52	20	17	....	....	....
30	....	....	....	....	5360	346	40	20	17	....	....	....
31	....	....	....	....	4840	....	40	20	....	....	....	....
Total	....	....	....	....	114200	65962	3334	1366	583	....	....	....
Mean	....	....	....	....	3680	2200	108	44.1	19.4	....	....	....
Max	....	....	....	....	5650	3980	306	114	28	....	....	....
Min	....	....	....	....	2020	346	40	20	14	....	....	....
Acre-ft.	....	....	....	....	226000	131000	6640	2710	1150	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of White River Near Meeker for 1921.

Drainage Area, 634 Square Miles. Altitude, 6,182 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	410	....	330	325	475	3380	3000	830	614	541	486	410
2	....	....	330	365	715	3280	2910	790	590	562	452	422
3	....	....	330	365	935	3280	2550	710	555	583	459	410
4	....	....	330	415	1110	3190	2640	670	555	576	486	376
5	....	....	330	475	1420	3190	2820	790	555	486	472	422
6	....	....	330	405	1660	3190	2460	830	541	428	472	392
7	....	....	330	365	1660	3870	2110	750	513	486	486	366
8	....	....	330	365	1360	3770	2110	590	513	452	452	366
9	....	....	300	390	1210	3970	2030	670	500	466	410	350
10	....	....	310	365	1210	4070	2280	654	506	486	356	340
11	....	....	320	390	1110	4170	2280	606	513	486	392	371
12	....	....	330	415	1020	4570	2280	569	500	446	376	410
13	....	....	345	415	1360	5370	2200	555	540	428	398	410
14	....	....	380	415	1660	5570	1480	670	576	398	410	410
15	....	....	365	390	2000	5870	998	606	576	382	371	410
16	....	....	365	365	2520	6070	910	606	576	410	366	410
17	....	....	365	415	2840	5770	870	576	569	446	382	360
18	350	....	365	415	2600	5370	830	534	590	513	366	390
19	....	....	415	445	2370	4670	870	520	630	459	366	410
20	....	....	365	475	2000	4170	830	555	590	422	376	410
21	....	....	345	475	2220	3870	830	654	569	379	398	410
22	....	....	365	445	2520	3770	830	734	562	371	376	400
23	....	....	365	475	2760	3770	830	814	562	398	361	400
24	....	....	365	475	2920	3670	830	782	562	555	356	330
25	....	....	365	505	3010	3770	830	790	569	520	422	330
26	....	....	365	505	2840	3570	830	710	576	486	410	340
27	....	....	325	475	2840	3570	790	630	569	486	398	360
28	....	....	305	505	3380	3480	790	630	540	472	434	360
29	....	....	285	475	3770	3380	790	638	548	486	422	360
30	....	....	285	505	3970	3100	710	630	527	500	404	360
31	....	....	285	....	3870	....	710	646	....	500	....	370
Total	....	....	10520	12815	65335	122740	47228	20739	16686	14609	12315	11865
Mean	355	345	339	427	2110	4090	1520	669	556	471	410	383
Max	....	....	415	505	3970	6070	3000	830	630	583	486	....
Min	....	....	285	325	475	3100	710	520	500	371	356	....
Acre-ft.	21800	19200	20800	25400	130000	243000	93500	41100	33100	29000	24400	23600

Discharge of White River at Meeker for 1922.

Drainage Area, 634 Square Miles. Altitude, 6,182 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	518	614	2040	1240	416	394	....	....	....
2	....	....	....	416	660	2140	1120	422	384	....	....	....
3	....	....	....	438	720	2090	1010	428	398	....	....	....
4	....	....	....	461	750	1930	935	434	405	....	....	....
5	....	....	....	461	920	1980	916	416	461	....	....	....
6	....	....	....	461	1550	2090	972	402	461	....	....	....
7	....	....	....	490	1500	2110	954	391	448	....	....	....
8	....	....	....	518	1530	2400	868	374	416	....	....	....
9	....	....	....	549	1380	2620	820	364	402	....	....	....
10	....	....	....	580	1350	2700	785	364	416	....	....	....
11	....	....	....	614	1150	2670	690	387	425	....	....	....
12	....	....	....	649	750	2640	628	360	416	....	....	....
13	....	....	....	580	770	2720	561	349	412	....	....	....
14	....	....	....	518	770	2640	507	355	412	....	....	....
15	....	....	409	461	800	2500	518	360	412	....	....	....
16	....	....	....	416	916	2180	518	355	412	....	....	....
17	....	....	....	412	1120	2040	518	368	416	....	....	....
18	....	....	....	402	1500	2230	518	377	416	....	....	....
19	....	....	461	384	1550	2370	512	360	416	....	....	....
20	....	....	461	391	1690	2480	501	377	409	....	....	....
21	....	....	461	402	1910	2370	518	387	409	....	....	....
22	....	....	461	472	1840	2260	524	384	405	....	....	....
23	....	....	461	461	2040	2180	495	380	409	....	....	....
24	294	....	461	518	2220	2090	472	384	416	....	....	....
25	....	....	461	543	2390	2010	420	368	416	....	....	....
26	....	....	461	580	2550	1820	412	355	409	....	....	....
27	....	....	461	555	2700	1570	409	358	391	....	....	....
28	....	....	461	594	2720	1350	430	358	387	....	....	....
29	....	....	461	608	2670	1270	409	358	398	....	....	....
30	....	....	461	614	2460	1220	398	374	405	....	....	....
31	....	....	461	....	2250	....	405	391	....	....	....	....
Total	....	....	....	15066	47740	64710	19983	11756	12376	....	....	....
Mean	350	370	400	502	1540	2160	645	379	413	....	....	....
Max	....	....	....	649	2720	2720	1240	434	461	....	....	....
Min	....	....	....	384	614	1220	398	349	384	....	....	....
Acre-ft.	21500	20500	24600	29900	94700	129000	39700	23300	24600	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

COLORADO RIVER DRAINAGE

U. S. Geological Survey and F. C. Snyder, State Hydrographer

COLORADO RIVER AT HOT SULPHUR SPRINGS

Location—At the bridge connecting the Denver, Northwestern & Pacific Railway station with the town of Sulphur Springs, in Sec. 2, T. 1 N., R. 78 W. Nearest tributary, Beaver Creek, enters the river 2 miles below the station.

Records Available—July 22, 1904, to September 30, 1909, a station was maintained at this point by the United States Geological Survey; September 23, 1910, to September 30, 1922.

Drainage Area—946 square miles.

Gage—Chain gage.

Channel—Practically permanent.

Discharge Measurements—Made from the bridge during high and ordinary stages, and by wading during low water.

Winter Flow—The river is frozen over during the winter months, and discharge measurements are made to determine the winter flow.

Accuracy—Results considered good.

Co-operation—Records furnished by the United States Geological Survey.

COLORADO RIVER AT GLENWOOD SPRINGS

Location—At Glenwood Springs, at the point where the discharge from the hot springs enters the river. No Name Creek enters Grand River about 2 miles above the station, and Roaring Fork enters one-half mile below.

Records Available—May 12, 1899, to September 30, 1922.

Drainage Area—4,520 square miles.

Gage—Chain gage originally installed at the railroad bridge just above the Roaring Fork, but in 1900 a staff gage was installed at the present location. Since 1902, a number of automatic gages referred to the staff gage datum have been used, the present one being a Friez gage.

Channel—Slightly shifting.

Discharge Measurements—Made from a car and cable stretched beneath the State Street bridge, which crosses the river one-third mile below the gage.

Winter Flow—Ice never forms at the station, as the hot water from the springs keeps the water above the freezing point.

Artificial Control—The Shoshone power plant of the Central Colorado Power Company, 6 miles above Glenwood Springs, has sufficient pondage to withhold the flow of the river for a portion of the day during low-water periods.

Accuracy—Conditions are favorable for accurate results, and the estimates are considered reliable.

Co-operation—Records furnished by the United States Geological Survey.

COLORADO RIVER NEAR PALISADES

Location—At the state bridge 2 miles above Palisades, in Sec. 2, T. 11 S., R. 98 W. Nearest important tributary, Plateau Creek enters about 6 miles above the station.

Records Available—April 9, 1902, to September 30, 1922.

Drainage Area—8,550 square miles.

Gage—Chain gage; location and datum unchanged.

Channel—Practically permanent.

Discharge Measurements—Made from bridge in Palisades.

Winter Flow—The river usually freezes over a portion of the year, but except for slush and ice and an occasional thin ice cover, the effect on the gage heights is slight.

Accuracy—Conditions are favorable for accurate results, and the estimates should be reliable.

Co-operation—Records furnished by the United States Geological Survey.

COLORADO RIVER NEAR FRUITA

Location—At highway bridge, 1½ miles south of Fruita, in Sec. 20, T. 1 N., R. 2 W., Ute Principal Meridian. Nearest important tributary, Little Salt Wash, enters a mile below the station; Gunnison River enters at Grand Junction, about 12 miles above.

Records Available—Flood records during 1908, 1909, and 1910; April 1, 1911 (station established), to September 30, 1922.

Drainage Area—16,800 square miles.

Gage—Chain gage; datum was raised 0.05 foot May 3, 1911.

Channel—Shifts at high water.

Discharge Measurements—Made from the highway bridge.

Winter Flow—The river is frozen over during a portion of the year and readings are discontinued.

Accuracy—Results considered good.

Co-operation—Records furnished by the United States Geological Survey.

FRASER RIVER NEAR ARROW

Location—In Sec. 4, T. 2 S., R. 75 W., one-quarter mile from Vasquez Siding; 1½ miles southwest of Arrow.

Records Available—September 23, 1910, to September 30, 1922.

Drainage Area—29 square miles.

Gage—Friez automatic gage on left bank. Prior to June 3, 1916, vertical staff gage located one mile upstream.

Discharge Measurements—Made from log bridge and by wading.

Channel—Probably permanent.

Diversions—There is a court decree for the diversion of 53 second-feet from the headwaters of this stream across the divide to the Clear Creek basin.

Accuracy—Records are considered good.

Co-operation—Stations maintained by the United States Geological Survey, by whom the records are furnished.

WILLIAMS FORK NEAR PARSHALL

Location—On highway bridge at Field's Ranch, 4 miles above the mouth of the river, about Sec. 36, T. 1 N., R. 79 W. Nearest tributary is Battle Creek, which enters from the west 2 miles below the station.

Records Available—July 25, 1904, to September 30, 1922.

Drainage Area—185 square miles.

Gage—Vertical staff and automatic gages.

Channel—Shifting after high water.

Discharge Measurements—Made from bridge to which the gage is attached.

Winter Flow—Ice causes backwater during winter months.

Accuracy—Conditions are favorable for accurate results, and the estimates should be reliable.

Co-operation—Station maintained in co-operation with the United States Geological Survey.

TROUBLESOME CREEK NEAR TROUBLESOME

Location—In Sec. 12, T. 1 N., R. 80 W., at highway bridge one mile north of Troublesome.

Drainage Area—175 square miles.

Records Available—July 23, 1904, to October 31, 1905, April 26 to September 30, 1922.

Gage—Vertical staff.

Discharge Measurements—Wading at low stage and from bridge during high stages.

BLUE RIVER AT DILLON

Location—At the cemetery bridge on the outskirts of Dillon, in Sec. 18, T. 5 S., R. 77 W., on the edge of the Leadville National Forest, a short distance above the mouth of Snake River. Ten-Mile Creek also enters below the station.

Records Available—October 15, 1910, to September 30, 1922.

Drainage Area—110 square miles.

Gage—Staff and automatic gages.

Channel—Practically permanent.

Discharge Measurements—Made by wading near by and from bridge.

Winter Flow—Ice causes backwater during the winter and discharge measurements are made to determine the flow.

Accuracy—Records considered reliable.

Co-operation—Records furnished by the United States Geological Survey.

EAGLE RIVER AT RED CLIFF

Location—In Sec. 29, T. 6 S., R. 80 W., in the town of Red Cliff, in the Holy Cross National Forest, 100 yards above the mouth of Turkey Creek, and 1 mile above the mouth of Homestake Creek.

Records Available—January 8, 1911, to September 30, 1922.

Drainage Area—74 square miles.

Gage—Chain gage; location and datum unchanged.

Channel—Slightly shifting.

Discharge Measurements—Made from highway bridge at 800 feet above during high water, and by wading at ordinary stages.

Winter Flow—Little, if any, ice forms at this station.

Accuracy—Records considered good.

Co-operation—Records furnished by the United States Geological Survey.

EAGLE RIVER AT EAGLE

Location—In Sec. 33, T. 4 S., R. 84 W., at the highway bridge at Eagle, in Eagle County, three-fourths of a mile above the mouth of Brush Creek.

Records Available—March 12, 1905, to February 10, 1907, at site a short distance below the mouth of Brush Creek; January 17, 1911, to September 30, 1922.

Drainage Area—630 square miles.

Gage—Stevens water stage recorder.

Channel—Practically permanent.

Discharge Measurements—Made from highway bridge at ordinary and high stages and by wading during low water.

Winter Flow—Ice causes backwater during the winter. Discharge measurements are made to determine the winter flow.

Accuracy—Records considered good.

Co-operation—Records furnished by the United States Geological Survey.

TURKEY CREEK AT RED CLIFF

Location—In Sec. 19, T. 6 S., R. 80 W., at highway bridge in Red Cliff, 800 feet above the mouth of the creek.

Records Available—June 30, 1913, to September 30, 1921.

Drainage Area—27 square miles.

Gage—Vertical staff.

Discharge Measurements—Made from single span bridge, and by wading.

Winter Flow—Ice causes backwater during the winter months, and discharge measurements are made to determine the flow.

Accuracy—Records considered good.

Co-operation—Records furnished by the United States Geological Survey.

ROARING FORK AT ASPEN

Location—In Sec. 7, T. 10 S., R. 84 W., at the bridge near the old power plant at Aspen, above Castle, Maroon and Hunter Creeks.

Records Available—January 1, 1911, to September 30, 1921.

Drainage Area—109 square miles.

Gage—Vertical staff.

Channel—Practically permanent.

Discharge Measurements—Made by wading, except during high water, when bridge is used.

Winter Flow—Ice causes backwater during the winter; discharge measurements are made to determine the winter flow.

Accuracy—Results are reliable.

Co-operation—Records furnished by the United States Geological Survey.

ROARING FORK AT GLENWOOD SPRINGS

Location—In Sec. 9, T. 6 S., R. 89 W., on bridge 1,500 feet above the mouth of the river in Glenwood Springs. Nearest important tributary enters about 3 miles above the station.

Records Available—April 6, 1906, to September 30, 1909; September 21, 1910, to September 30, 1922.

Drainage Area—1,450 square miles.

Gage—November 20, 1915, a new slope gage established 800 feet above bridge. Recording gage installed October 27, 1917.

Channel—Practically permanent, but rough. Extremely high water in Grand River may cause backwater at the gage. Measurements made at stages as high as 5.7 feet on Roaring Fork, and 9.2 feet on Grand River have shown no backwater effect.

Discharge Measurements—Made from highway bridge.

Winter Flow—Surface ice rarely forms entirely across the river, but slush and anchor ice frequently occur. Discharge measurements sometimes show backwater from ice.

Accuracy—Conditions are favorable for accurate results; estimates should be reliable.

Co-operation—Records furnished by the United States Geological Survey.

ELK CREEK AT NEW CASTLE

Location—In Sec. 31, T. 5 S., R. 90 W., in the town of New Castle.

Records Available—March 17 to September 30, 1922.

Gage—Staff gage located on the left abutment of highway bridge.

Discharge Measurements—Made from bridge at high stages and wading at low stages.

PARACHUTE CREEK AT GRAND VALLEY

Location—In the N. W. Quarter Sec. 12, T. 7 S., R. 96 W., at Alpin Ranch, one-half mile northwest of Grand Valley.

Drainage Area—196 square miles.

Records Available—April 7, 1921, to September 30, 1922.

Discharge Measurements—From bridge during high stages and wading at low stages.

ROAN CREEK NEAR DEBEQUE

Location—On section line between Sections 10 and 15, T. 7 S., R. 98 W., at highway bridge 11 miles north of Debeque.

Drainage Area—210 square miles.

Records Available—April 8, 1921, to September 30, 1922.

Discharge Measurements—Wading at low stages and from bridges during high stages.

PLATEAU CREEK NEAR COLLBRAN

Location—In Sec. 23, T. 9 S., R. 94 W., on private bridge about seven miles east of Collbran.

Records Available—August 20, 1921, to September 30, 1922.

Gage—Automatic and staff gages.

Drainage Area—88 square miles.

Channel—Large boulders, fairly permanent.

Discharge Measurements—From bridge during high stages and wading at low stages.

BUZZARD CREEK NEAR COLLBRAN,

Location—In Sec. 14, T. 9 S., R. 94 W., on highway bridge about seven miles east of Collbran.

Records Available—August 18, 1921, to September 30, 1922.

Gage—Automatic and staff gages.

Drainage Area—136 square miles.

Channel—Fairly permanent.

Discharge Measurements—From bridge during high stages and wading at low stages.

TAYLOR RIVER AT ALMONT

Location—At highway bridge in Almont, in Sec. 22, T. 51 N., R. 1 E., New Mexico Principal Meridian, 800 feet above the junction of Taylor and East Rivers.

Records Available—July 27, 1910, to September 30, 1922.

Drainage Area—413 square miles.

Gage—Staff and automatic gages.

Channel—Practically permanent.

Discharge Measurements—Made from highway bridge.

Winter Flow—Ice causes backwater.

Accuracy—Conditions are favorable for accurate results; the estimates are considered good.

Co-operation—Records furnished by the United States Geological Survey.

GUNNISON RIVER NEAR GUNNISON

Location—At highway bridge in Sec. 3, T. 49 N., R. 1 W., 2 miles below Gunnison. Nearest tributary, Tomichi Creek, enters about 1 mile below.

Records Available—November 27, 1910, to November 30, 1914; April 27, 1916, to September 30, 1922.

Drainage Area—1,010 square miles.

Gage—Standard chain gage.

Channel—Somewhat shifting.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Ice causes backwater during the winter months.

Co-operation—Station is maintained in co-operation with the Unieed States Geological Survey.

GUNNISON RIVER NEAR GRAND JUNCTION

Location—In NW¼ Sec. 35, T. 1 S., R. 1 W., a quarter of a mile below the Redlands Irrigation and Power Company's canal, and one and one-half miles above mouth of Gunnison River in Grand Junction, in Mesa County, below all tributaries.

Drainage Area—7,920 square miles (measured on Colo. Geo. Survey map, scale 1:500,000).

Records Available—April 1, 1917, to September 30, 1922. From October 19, 1894, to December 21, 1895, and May 2, 1897, to November 30, 1899, station maintained nearer mouth.

Gage—Vertical staff at left bank one-quarter of a mile below canal intake; read by employee of Redlands Irrigation and Power Company. Original gage vertical staff attached to wall of D. & R. G. pump house some distance below present site. Moved July 5, 1895, to highway bridge one mile below present gage. Relation between different gages not determined.

Discharge Measurements—Made from car and cable at gage section.

Channel and Control—Channel composed of gravel well compacted; permanent. Control at rapids 500 feet down stream; practically permanent. Banks high and not subject to overflow.

Combined Flow—The combined flow of the Gunnison River and Redlands power canal represents the flow of the Gunnison River which enters the Grand River, less about 25 second-feet, which is used during the irrigation season.

Co-operation—Records furnished by the United States Geological Survey.

TOMICHI CREEK AT SARGENTS

Location—In NW¼ Sec. 28, T. 48 N., R. 5 E., at railroad bridge three-quarters of a mile west of Sargents, in Saguache County. Nearest tributary, Marshall Creek, which enters one-quarter mile above.

Drainage Area—145 square miles.

Records Available—May 12, 1917, to September 30, 1922.

Gage—Lallie recording gage installed October 5, 1917, and referred to vertical staff attached to downstream piling of railroad bridge.

Discharge Measurements—Made by wading or from pile bent bridge.

Channel and Control—Composed of gravel, shifting; control 30 feet down stream at small rapids of compact gravel; practically permanent.

Co-operation—Station maintained in co-operation with the United States Geological Survey.

LAKE FORK AT LAKE CITY

Location—In Sec. 34, T. 44 N., R. 4 W., at private bridge one-third mile above Henson Creek in Lake City, Hinsdale County.

Drainage Area—126 square miles (measured on topographic map).

Records Available—April 21, 1918, to September 30, 1922.

Gage—Vertical staff fastened to down-stream side right bridge abutment.

Discharge Measurements—Made by wading or from bridge.

Channel and Control—Bed of stream composed of coarse gravel well compacted; permanent. Banks not subject to overflow except during extreme high stages. Control located at small rapids 250 feet down stream; apparently permanent.

Ice—Stage-discharge relation seriously affected by ice.

Diversions—Practically none which do not return to stream above station. Court decrees for 22 second-feet from Lake Fork below station.

Regulation—Flow naturally regulated by Lake San Cristobal, located 4 miles up stream; area 1 square mile. During low water operation of power plant, located 1 mile up stream, may influence discharge slightly.

Co-operation—Records furnished by United States Geological Survey.

UNCOMPAHGRE RIVER AT OURAY

Location—Near highway bridge in Sec. 31, T. 44 N., R. 7 W., New Mexico Principal Meridian, half a mile south of Ouray, Colo. Nearest tributary, Canon Creek, enters 150 feet below; nearest tributary above is Bear Creek.

Records Available—January 25, 1911, to September 30, 1922; January 7 to March 17, 1908, records were kept at the power plant of the Ouray Electric Light & Power Co., 1 mile south of Ouray.

Drainage Area—44 square miles.

Gage—Vertical staff.

Channel—Permanent, except at time of high water, when channel scours and fills.

Discharge Measurements—Made from bridge during high water and by wading at ordinary stages.

Winter Flow—Little, if any, backwater from ice at this station, as channel remains open during the year.

Accuracy—Results considered reliable.

Co-operation—Records furnished by the United States Geological Survey.

Note—The discharge estimates include the diversions of Power House Flume which water is diverted above station and wasted back to river below station.

UNCOMPAHGRE RIVER BELOW OURAY

Location—In Sec. 30, T. 44 N., R. 7 W., at left bank 700 feet above the lowest bridge in Ouray, one-third mile below the railroad station. It is below all tributaries in Ouray.

Records Available—May 12, 1913, to September 30, 1922.

Drainage Area—76 square miles.

Gage—Vertical staff, moved upstream from former location. No relation established between old and new gages. Recording gage installed March 28, 1917.

Control—Shifting.

Discharge Measurements—Made from bridge and by wading.

Winter Flow—Ice causes little or no backwater, as the warm springs above prevent freezing.

Accuracy—Owing to the high altitude of the station (7,700 feet) there are diurnal fluctuations of stage at certain seasons, due to alternate melting and freezing, and the mean daily gage height, based on morning and evening readings and the maximum stage for the 24-hour period, may be somewhat in error. For this reason, and because of the shifting character of the channel, the estimates cannot be considered better than fair, or possibly good.

Co-operation—Records furnished by the United States Geological Survey.

UNCOMPAHGRE RIVER NEAR COLONA

Location—In Sec. 5, T. 46 N., R. 8 W., at highway bridge, 4 miles south of Colona.

Drainage Area—403 square miles.

Records Available—April 6, 1917, to September 30, 1922.

Gage—Staff and automatic gages.

Discharge Measurements—Made from suspension footbridge near gage.

Channel and Control—Somewhat shifting.

Extremes of Discharge—No data.

Ice—No data as station is discontinued during winter.

Co-operation—Daily discharge furnished by United States Reclamation Service.

UNCOMPAHGRE RIVER AT MONTROSE

Location—At highway bridge, one-fourth mile west of Montrose. Nearest important tributary, Happy Canyon Creek, enters about 2 miles below.

Records Available—April 22, 1903, to December 16, 1913; March 8, 1915, to September 30, 1922.

Drainage Area—565 square miles.

Gage—Vertical staff; location and datum unchanged.

Channel—Extremely shifting.

Discharge Measurements—Made from the bridge.

Winter Flow—Although ice forms along the edges of the river during the winter months, the river does not freeze over. Observations of gage heights are, however, discontinued during November, December, January, February and March.

Accuracy—Although the channel is extremely shifting, sufficient discharge measurements were made to afford data for estimates by the indirect method, and these estimates may be considered reliable.

Co-operation—Records furnished by the United States Geological Survey.

UNCOMPAHGRE RIVER NEAR DELTA

Location—At highway bridge on township line between R's. 95 and 96 W., T. 15 S., 2 miles south of Delta; no tributaries between the station and the mouth and no important tributaries for several miles upstream.

Records Available—April 29, 1903, to September 30, 1922.

Drainage Area—1,130 square miles.

Gage—Vertical staff.

Channel—Extremely shifting.

Discharge Measurements—Made from the bridge.

Winter Flow—The flow is probably not materially affected by ice, although ice forms along the edges and slush ice frequently occurs. Observations are discontinued during the winter months.

Accuracy—Estimates only fair, or, for certain periods, possibly good, measurements being insufficient to permit use of indirect method for shifting channels to fullest extent.

Co-operation—Records furnished by the United States Geoloogical Survey.

NORTH FORK OF GUNNISON RIVER NEAR POANIA

Location—In Sec. 28, T. 13 S., R. 91 W., on highway bridge two miles west of Paonia.

Records Available—January 1, September 30, 1922.

Gage—Chain gage on highway bridge.

Channel—Slightly shifting.

Discharge Measurements—Made by wading at low stages and from bridge during high stages.

Records—Good.

DALLAS CREEK NEAR RIDGWAY

Location—In Sec. 5, T. 48 S., R. 8 W.

Records Available—March 1, to September 30, 1922.

Gage—Vertical staff fastened to highway bridge.

Discharge Measurements—From highway bridge during high stages and wading at low stages.

LEROUX CREEK NEAR LAZEAR

Location—In Sec. 33, T. 13 S., R. 93 W., at highway bridge, about 8 miles north of Lazear, in Delta County. No important tributary within several miles.

Drainage Area—52 square miles (measured on Forest atlas).

Records Available—May 15, 1917, to September 30, 1922.

Gage—Stevens water-stage recorder.

Discharge Measurements—Made from single-span bridge or by wading.

Channel and Control—Channel composed of gravel and boulders; very rough. Control 50 feet downstream, somewhat shifting during 1918.

SURFACE CREEK AT CEDAREDGE

Location—About Sec. 29, T. 13 S., R. 94 W., at Cedaredge, in Delta County. Nearest tributary, Mill Creek, enters 4 miles above.

Drainage Area—43 square miles.

Records Available—May 16, 1917, to September 30, 1922.

Gage—Stevens water-stage recorder referred to vertical staff fastened to right concrete abutment of footbridge 400 feet upstream from highway bridge in Cedaredge.

Discharge Measurements—Made from footbridge at gage section.

Channel and Control—Channel of small boulders filled in behind control, which is old concrete weir filled up flush with boulders and gravel, located 12 feet downstream. Control permanent. Above stage 0.7 foot water flows through an overflow channel which may shift somewhat.

Diversions—Adjudicated decrees for diversions of 142 second-feet from Surface Creek above station, of which 67 second-feet are for diversion out of the drainage basin. Below, adjudicated decrees for 272 second-feet.

ESCALANTE CREEK NEAR DELTA

Location—In Sec. 20, T. 15 S., R. 97 W., about two miles above mouth and twelve miles west of Delta.

Records Available—April 1 to September 30, 1922.

Gage—Chain gage on highway bridge.

Channel—Shifting.

Records—Poor.

Discharge Measurements—From bridge during high stages and wading at low stages.

KANNAH CREEK NEAR WHITEWATER

Location—In Sec. 34, T. 12 S., R. 97 W., a quarter of a mile below intake for water supply of Grand Junction, and 17 miles east of Whitewater, in Mesa County. Nearest tributary, Coal Creek, enters short distance above station.

Drainage Area—38 square miles (measured on Forest atlas).

Records Available—October 15, 1917, to September 30, 1921.

Gage—Vertical staff located at right bank 300 feet above footbridge; read by James Woods.

Discharge Measurements—Made by wading or from cable near gage.

Channel and Control—Bed composed of gravel and small boulders; will shift. Control located at riffle of small boulders 75 feet downstream; will shift during high water.

Ice—Stage-discharge relation not affected by ice, except for short periods.

Regulation—Diurnal fluctuation in spring from alternate melting and freezing of mountain snow. No artificial regulation.

Combined Flow—Flow diverted by city intake measured by weir and flow added to that at gaging station to show total flow of creek.

Co-operation—Station maintained in conjunction with United States Geological Survey.

DOLORES RIVER AT DOLORES

Location—At highway bridge in Sec. 9, T. 37 S., R. 15 W., N. M. P. M. In the town of Dolores about ¼ mile southwest of D. & R. G. depot. 1922 records referred to different datum than previous records.

Records Available—June 24, 1895, to October 31, 1903; November 1, 1910, to November 30, 1912; April 11, to September 30, 1922.

Drainage Area—524 square miles.

Gage—Chain gage on lower side of bridge.

Channel—Permanent.

Discharge Measurements—Made from bridge in high stages and wading at low stages.

DOLORES RIVER AT BEDROCK

Location—In Sec. 17, T. 47 N., R. 18 W., at highway bridge at Bedrock, Montrose County. Nearest perennial tributary, West Paradox Creek, enters below station.

Drainage Area—1,910 square miles (measured on Colo. Geol. Survey map, scale 1:500,000).

Records Available—April 26 to September 30, 1922.

Gage—Chain attached to up-stream side of bridge; read by Henry Dockery.

Discharge Measurements—Made from single-span bridge or by wading.

Channel and Control—Bed of stream composed of compact sand and silt, which was apparently permanent during 1918; no well-defined control.

LOST CANON CREEK NEAR DOLORES

Location—In Sec. 16, T. 37 S., R. 15 W., on D. & R. G. W. R. R. bridge about one-half mile from Dolores

Records Available—April 1 to September 30, 1922

Drainage Area—81 square miles.

Gage—Staff gage.

Discharge Measurements—Made from R. R. bridge during extreme high stages and wading at intermediate and low stages.

SAN MIGUEL RIVER AT NATURITA

Location—On line between Ranges 15 and 16 West, T. 46 N., at Highway Bridge in Naturita, Montrose County. Nearest tributary. Basin Creek, enters one-half mile down stream.

Drainage Area—1,909 square miles (measured on Colo. Geol. Survey map, scale 1:500,000).

Records Available—April 26, 1918, to September 30, 1922.

Gage—Chain fastened to upstream side of bridge.

Discharge Measurements—Made from single-span bridge or by wading.

Channel—Bed of stream composed of coarse gravel and small boulders, and is rough.

Diversions—Court decrees for diversion of 102 second-feet from San Miguel River, of which approximately 84 second-feet are above station.

Discharge of Colorado River at Hot Sulphur Springs for 1921.

Drainage Area, 946 Square Miles. Altitude, 7,665 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	141	740	6090	2020	822	....	358	170	112
2	....	....	....	210	1150	5400	1750	822	....	358	163	112
3	....	....	....	261	1300	4990	1930	822	....	272	160	112
4	....	....	....	275	1670	5620	1670	822	....	272	138	112
5	....	....	....	270	1750	6090	1430	768	....	230	129	112
6	....	....	....	302	1930	8310	1360	640	....	230	123	112
7	....	....	....	298	2110	6860	1360	590	....	230	129	112
8	....	....	....	251	1840	6860	1360	565	....	230	129	112
9	....	....	....	268	1430	6340	1300	565	....	230	132	112
10	....	....	....	272	1300	7130	1300	615	....	230	126	112
11	....	....	....	358	1360	8000	1360	565	....	230	120	132
12	....	....	....	445	1360	8000	1430	540	....	230	129	132
13	....	....	....	445	1670	8000	1360	565	....	230	129	132
14	....	....	....	445	1840	8000	1360	565	....	230	116	132
15	....	....	....	445	2110	9280	1360	640	....	230	116	132
16	....	....	....	450	2110	8630	1300	640	....	230	116	132
17	....	....	....	445	2110	7700	1300	640	....	230	116	132
18	....	....	....	445	2020	6600	1300	615	....	230	116	132
19	....	....	....	468	1670	6340	1300	590	....	230	116	132
20	....	....	....	468	2210	4990	1240	590	....	230	116	132
21	....	....	....	491	2310	3870	1180	590	....	230	116	147
22	....	....	....	516	2640	3130	1180	590	....	230	114	147
23	....	....	....	516	2760	2880	1180	540	....	230	114	147
24	....	....	....	540	3270	3000	1070	540	....	204	114	147
25	....	....	....	565	3710	3000	1070	540	....	197	114	147
26	....	....	....	540	3710	2880	1150	565	....	193	114	147
27	....	....	....	491	3130	2760	1100	540	....	193	114	147
28	....	....	....	445	3870	2880	905	565	....	193	114	147
29	....	....	....	516	4590	2530	822	540	....	197	114	147
30	....	....	....	565	5190	2310	822	540	....	190	114	147
31	....	....	....	....	5400	....	850	540	....	180	....	147
Total	4137	3108	3658	12147	74260	168470	40119	19071	9900	7177	3849	3906
Mean	133	111	118	405	2400	5620	1290	615	330	232	128	126
Max	147	111	118	565	5400	9280	2020	822	....	358	170	....
Min	127	111	118	141	740	2310	822	540	....	180	....	....
Acre-ft.	8180	6160	7260	24100	148000	334000	79300	37800	19600	14300	7620	7750

Discharge of Colorado River at Hot Sulphur Springs for 1922.

Drainage Area, 946 Square Miles. Altitude, 7,665 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	125	111	112	180	905	2310	1240	401	336	....	....	....
2	125	111	112	180	905	2110	1120	445	358	....	....	....
3	125	111	112	180	905	2210	1020	491	294	....	....	....
4	125	111	112	180	960	2110	960	423	294	....	....	....
5	125	111	112	180	960	1930	850	380	315	....	....	....
6	125	111	112	180	1120	2310	905	380	272	....	....	....
7	125	111	112	180	1240	2530	1020	358	251	....	....	....
8	135	111	112	180	1300	3270	905	336	234	....	....	....
9	135	111	112	180	1300	3560	850	315	219	....	....	....
10	135	111	112	180	1180	3560	850	272	193	....	....	....
11	135	114	130	180	1070	3270	795	315	193	....	....	....
12	135	114	130	180	960	3130	740	315	170	....	....	....
13	135	114	130	180	960	3130	590	272	157	....	....	....
14	135	114	130	170	690	3410	565	294	151	....	....	....
15	135	114	130	212	740	3000	540	272	144	....	....	....
16	129	114	130	247	740	2530	540	294	144	....	....	....
17	129	114	130	167	740	1930	540	272	144	....	....	....
18	129	114	130	154	1020	1750	491	423	144	....	....	....
19	129	114	130	154	1180	1930	468	491	144	....	....	....
20	129	114	130	170	1360	2110	468	445	141	....	....	....
21	121	110	148	215	1590	2020	468	423	132	....	....	....
22	121	110	148	401	1590	2020	491	401	120	....	....	....
23	121	110	148	540	1930	1750	468	380	120	....	....	....
24	121	110	148	565	2210	1670	445	358	114	....	....	....
25	121	110	148	615	2760	1670	445	380	109	....	....	....
26	118	110	148	690	3000	1670	380	358	109	....	....	....
27	118	110	148	665	3130	1430	358	294	112	....	....	....
28	118	110	148	615	3130	1300	358	272	126	....	....	....
29	118	....	148	690	3410	1300	491	294	126	....	....	....
30	118	....	148	665	3410	1300	423	315	132	....	....	....
31	118	....	148	....	2760	....	401	315	....	....	....	....
Total	3913	3147	4048	9275	49155	68220	20185	10984	5498	....	....	....
Mean	126	112	131	309	1590	2270	651	354	183	....	....	....
Max	....	....	....	690	3410	3560	1240	491	358	....	....	....
Min	....	....	....	....	690	1300	358	272	109	....	....	....
Acre-ft.	7750	6220	8060	18400	97800	135000	40000	21800	10900	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado (Grand) River at Glenwood Springs for 1921.

Drainage Area, 4,520 Square Miles. Altitude, 5,747 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	874	780	928	1080	2180	21700	8720	3050	3500	1180	1140	1000
2	738	696	984	1110	3020	21700	8390	3100	3820	1180	1140	1120
3	852	679	1020	1100	3920	21200	8390	3150	3300	1180	1110	1050
4	962	842	1120	1330	5230	20400	7740	3150	2930	1180	1100	969
5	915	753	1240	1680	6800	21200	7420	3200	2600	1180	1100	633
6	860	539	1400	1800	8390	22500	6800	2930	2310	1150	1120	721
7	820	690	1420	1680	9750	24300	6200	2930	2180	1150	1120	667
8	780	742	1330	1380	9060	23400	5630	2600	2120	1190	1110	670
9	735	679	1230	1300	7110	23400	5360	2450	2050	1250	1090	803
10	798	700	1050	1310	6500	25100	5100	2520	1980	1230	966	837
11	682	761	1010	1280	5910	26400	5100	2520	1920	1180	912	1220
12	631	719	1000	1500	5630	27300	5200	2450	1860	1140	996	1330
13	695	596	987	1860	6500	26800	5400	2450	1800	1120	978	1370
14	792	697	774	1800	8060	26000	5600	2450	1740	1080	1130	1280
15	880	765	1120	1800	9060	27700	5800	2760	1680	1050	1230	1510
16	815	632	1210	1740	10100	27700	5630	3200	1620	1050	1100	1460
17	882	601	1560	1330	11200	25600	5630	2930	1560	1050	1070	1270
18	941	631	1500	1560	11600	22100	5360	2680	1560	1030	1070	1250
19	983	687	1620	1800	11900	19100	5500	2450	1560	1010	978	1100
20	964	690	1680	1920	10800	16100	5630	2450	1620	944	740	1130
21	805	670	1740	2180	9750	13100	4850	2520	1560	952	915	1220
22	796	650	1560	2120	10800	11600	4730	2520	1500	1060	1050	1160
23	731	640	1440	2050	11900	11600	5360	3200	1440	1130	1080	1230
24	638	650	1560	2310	13100	11900	4230	4140	1440	1070	1100	1000
25	902	670	1440	2760	14400	11900	4850	4260	1330	1120	1100	865
26	751	730	1310	2310	14800	11200	4490	4030	1380	1320	1050	965
27	726	805	1180	2120	14400	10800	4260	3500	1280	1320	1200	1000
28	794	919	1090	1920	15700	10500	3820	3300	1220	1280	1170	1070
29	823	....	1090	1860	17400	10100	3500	3200	1220	1270	936	994
30	653	....	1090	1920	20000	9400	3200	3200	1210	1220	952	994
31	766	....	1080	....	21200	....	3020	3110	....	1180	....	988
Total	24984	19613	38763	51910	316170	581800	171910	92400	57290	35446	31753	32876
Mean	806	700	1250	1730	10200	19400	5550	2980	1910	1140	1060	1060
Max	983	919	1740	2760	21200	27700	8720	4260	3820	1320	1230	1510
Min	631	539	774	1080	2180	9400	3020	2450	1210	944	740	633
Acre-ft.	49600	38900	76900	103000	627000	115000	341000	183000	114000	70100	63100	65200

Discharge of Colorado (Grand) River at Glenwood Springs for 1922.

Drainage Area, 4,520 Square Miles. Altitude, 5,747 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1040	652	805	1240	3500	13500	5910	2180	1640	....	....	....
2	979	665	733	1220	3710	11200	5500	2240	1760	....	....	....
3	964	600	790	1250	3820	10800	4980	2520	1810	....	....	....
4	1060	978	790	1480	4030	10500	4610	2520	1700	....	....	....
5	920	726	882	1870	4370	10100	4490	2180	1700	....	....	....
6	905	790	880	2180	5230	10800	4370	1930	1590	....	....	....
7	562	719	738	2180	6800	11900	4140	1870	1480	....	....	....
8	528	747	792	1760	7420	13900	3920	1700	1380	....	....	....
9	626	761	839	1640	7110	15700	3500	1640	1360	....	....	....
10	624	890	766	1640	6800	15200	3600	1580	1300	....	....	....
11	681	882	864	1540	5630	14800	3710	1580	1280	....	....	....
12	760	858	714	1370	4850	13900	3400	1570	1290	....	....	....
13	653	805	936	1370	4370	13900	3110	1480	1260	....	....	....
14	723	754	867	1310	3920	14400	2840	1480	1220	....	....	....
15	760	775	1000	1260	3710	13900	2600	1380	1180	....	....	....
16	852	775	1210	1250	3600	12300	2450	1480	978	....	....	....
17	790	850	1250	1280	3500	10500	2450	1640	1230	....	....	....
18	931	866	1810	1270	4140	10300	2310	1760	1140	....	....	....
19	816	890	1590	1230	5500	10100	2240	1930	1040	....	....	....
20	782	954	1480	1170	6500	10300	2180	2050	1040	....	....	....
21	677	994	1380	1160	7420	10600	2180	1990	1040	....	....	....
22	723	1110	1540	1260	8060	11200	2180	1870	1040	....	....	....
23	976	962	1930	1810	8060	10800	2180	1870	1010	....	....	....
24	920	882	2120	2180	9400	9750	2180	1810	962	....	....	....
25	969	882	2240	2380	11200	9400	2050	1760	1090	....	....	....
26	1130	906	1930	2520	12300	8720	1930	1700	946	....	....	....
27	1050	978	1590	2600	14400	7740	1810	1640	927	....	....	....
28	872	994	1590	2600	15200	6500	1760	1640	1060	....	....	....
29	600	....	1430	2680	15700	5910	2180	1540	1080	....	....	....
30	749	....	1310	3020	15700	5910	2600	1590	1070	....	....	....
31	626	....	1280	....	15200	....	2380	1590	....	....	....	....
Total	25248	23645	38076	51720	231150	334530	95740	55710	37603	....	....	....
Mean	814	844	1230	1720	7460	11200	3090	1800	1250	....	....	....
Max	1130	1110	2240	3020	15700	15700	5910	2520	1810	....	....	....
Min	528	600	714	1160	3500	5910	1760	1380	927	....	....	....
Acre-ft.	50100	46900	75600	102000	459000	666000	190000	111000	74400	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado (Grand) River near Palisade for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1500	2250	2120	3980	34600	18000	5480	6340	1940	2000	2000
2	....	1500	2460	1820	5030	34000	17000	6740	7160	2180	1940	1940
3	....	1500	2540	2180	6880	33100	14500	6210	6210	2180	1940	1880
4	....	1580	2780	2250	9740	32500	13900	5960	5360	2000	1940	1880
5	....	1700	2860	2780	12400	32500	14100	5250	4810	1940	2000	1820
6	....	1640	2780	2940	15600	34300	12700	4810	4600	1880	2000	1640
7	....	1580	2940	3030	17800	40200	10900	4280	3780	1940	2000	1480
8	....	1370	2620	2620	16600	38200	10100	3980	3580	1880	1940	1420
9	....	1480	2460	2460	13800	37000	9900	3680	3390	1940	1880	1530
10	....	1480	2120	2320	11400	41900	10400	3580	3030	2060	1880	1530
11	....	1820	2060	2390	10600	44400	9900	3580	3030	2120	1940	1880
12	....	1820	2060	2620	10200	46200	10100	3480	2780	2120	1700	2060
13	....	1580	1940	3210	11400	47700	11000	3300	2620	2060	1700	2180
14	....	1640	1820	3390	14100	45800	11200	3120	2460	2120	1700	2460
15	....	1940	1880	3480	16800	48800	11900	3480	2120	2000	2060	2620
16	....	1820	2250	3210	19500	50800	11000	3880	2180	2000	2000	2700
17	....	1640	2540	2860	21200	43600	10200	4080	2120	2000	1900	2180
18	....	1480	2700	2320	20100	37600	9900	3880	2120	2000	1820	1940
19	....	1580	2780	3030	21400	31600	9260	3390	2180	1940	1800	2000
20	....	1640	2940	3120	18200	26800	9420	3120	2060	1880	1760	2060
21	....	1320	2940	3390	17000	22600	8790	3390	2060	1940	1680	2180
22	....	1640	2780	3480	18000	20500	7740	3680	2120	1880	1880	2250
23	....	1820	2700	3580	20100	21400	8480	4280	2060	1880	1940	2060
24	....	1880	2620	3980	22600	20500	9100	7740	2000	1940	2060	1940
25	....	1940	2460	4600	23500	19900	8180	8030	2000	2060	2180	1580
26	....	2180	2180	4390	23300	19700	7740	6740	1940	2120	2180	1640
27	....	2460	2060	3480	23800	19700	7160	6080	1880	2120	2250	1640
28	....	2180	2000	3210	25000	19400	6600	5360	1820	2120	2320	1700
29	....	....	2060	3210	28400	19200	5840	5250	1820	2060	2320	1580
30	....	....	2060	3300	32200	18600	5250	5140	1760	2000	2060	1570
31	....	....	2120	....	34000	....	4920	5250	....	2000	....	1570
Total	....	47710	74760	90770	544630	983100	315180	146220	91390	62300	58770	58910
Mean	....	1700	2410	3030	17600	32800	10200	4720	3050	2010	1960	1900
Max.	....	2460	2940	4600	34000	50800	18000	8030	7160	2180	2320	2700
Min.	....	1320	1820	1820	3980	18600	4920	3120	1760	1880	1680	1420
Acre-ft.	....	94400	148000	180000	1080000	1950000	627000	290000	181000	124000	117000	117000

Discharge of Colorado (Grand) River near Palisade for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	1640	2180	7880	24300	11000	4080	2460	....	....	....
2	....	....	1580	2120	8330	21900	10900	4080	2390	....	....	....
3	....	....	1530	2250	8790	21200	9900	3780	2460	....	....	....
4	....	....	1530	2320	9420	20800	8640	3880	2780	....	....	....
5	....	....	1530	2390	10600	19900	8180	3480	2620	....	....	....
6	....	....	1530	2460	12900	21000	8180	3300	2390	....	....	....
7	....	....	1580	2620	16800	23300	7740	2700	2180	....	....	....
8	....	....	1580	2780	18600	25800	7160	2540	1880	....	....	....
9	....	....	1530	2860	18200	27100	6740	2320	2000	....	....	....
10	....	....	1530	2780	15600	27400	6600	2250	1940	....	....	....
11	....	....	1580	2700	13400	26300	6880	2320	1940	....	....	....
12	....	....	1640	2540	11500	24300	6470	2250	1880	....	....	....
13	....	....	1640	2460	10100	24500	5720	2180	2060	....	....	....
14	....	....	1700	2120	9420	25300	5250	2060	1940	....	....	....
15	....	....	1880	2060	9100	24800	4700	1940	1640	....	....	....
16	....	....	2540	2120	9100	23000	4500	1880	1580	....	....	....
17	1480	....	2320	2000	9580	19500	4180	1940	1580	....	....	....
18	1530	....	2460	2000	11200	19000	4080	2540	1480	....	....	....
19	1580	....	2700	1940	13600	18800	3880	2780	1280	....	....	....
20	1640	....	2700	1880	16400	19200	3580	2860	1320	....	....	....
21	1480	....	2940	1940	17800	19200	3480	2940	1370	....	....	....
22	1530	....	2860	2320	18600	19000	3390	2860	1280	....	....	....
23	1370	....	2940	3210	19000	18000	3480	2780	1230	....	....	....
24	1420	....	3030	3980	20300	17400	3120	2700	1150	....	....	....
25	1480	....	3120	4700	22600	16000	2860	2460	1150	....	....	....
26	1700	....	2780	5140	25000	14700	2540	2320	1280	....	....	....
27	1640	....	2700	5480	27400	14100	2540	2250	1230	....	....	....
28	....	....	2460	5600	28700	12900	2620	2120	1420	....	....	....
29	....	....	2390	6210	31000	11500	2460	2180	1640	....	....	....
30	....	....	2320	6880	29900	11500	2700	2120	1640	....	....	....
31	....	....	2180	....	27400	....	2940	2390	....	....	....	....
Total	....	....	66440	92040	508220	611700	166410	82280	53190	....	....	....
Mean	....	....	2140	3070	16400	20400	5370	2650	1770	....	....	....
Max.	....	....	3120	6880	31000	27400	11000	4080	2780	....	....	....
Min.	....	....	1530	1880	7880	11500	2460	1880	1150	....	....	....
Acre-ft	....	....	132000	183000	1010000	1210000	330000	163000	105000	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Colorado (Grand) River near Fruita for 1921.

Drainage Area, 16,800 Square Miles. Altitude, 4,500 Feet Above Sea Leved.

Day	Jan.	Feb.	Mar.	Aprii	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2680	2730	3720	3540	6380	57100	25600	9380	9380	2730	3370	3460
2	2680	2730	3910	3200	9710	55100	22600	10800	9710	2880	3370	3720
3	2680	2730	3910	3200	13700	53100	21300	9380	9060	2880	3370	3720
4	2680	2730	4100	3910	17200	53100	20000	8750	9060	2960	3370	3370
5	2680	2730	4290	4860	21300	51100	18800	7880	8160	2880	3200	3120
6	2680	2730	4290	5270	27200	55100	17700	7601	7100	2880	3370	2880
7	2680	2580	4480	5060	28800	62100	15200	7100	6380	3040	3370	3040
8	2680	2580	4290	4480	24800	63100	14200	6380	5920	2880	3370	3040
9	2680	2580	4100	3720	21300	61100	13300	5920	5480	2880	3460	2880
10	2680	2730	3540	3720	17700	67100	13300	5480	5270	3040	3370	2880
11	2660	2730	3200	3540	15700	69100	13300	5480	4480	3040	3040	2880
12	2660	2730	2880	3910	14700	71100	12400	5480	4670	3200	3200	3040
13	2660	2730	3200	4670	16600	75100	14200	5060	4480	3200	3370	3200
14	2660	2880	3720	4860	21900	73100	15200	5060	4290	3040	3280	3200
15	2660	3200	3720	5060	26400	77100	15700	5700	4100	3040	3280	3040
16	2900	3040	3910	5060	30500	81100	16200	6380	3720	2960	3630	3040
17	2900	2730	4480	4670	37600	72100	15200	6380	3370	3040	3370	3040
18	2900	2730	4860	4290	34000	61100	15200	5920	3370	3040	3540	3200
19	2900	2730	4480	4290	34000	53100	14200	5920	3540	3040	3370	3120
20	2900	2730	4480	5060	30500	46100	13700	5480	3720	3040	3370	3120
21	2830	2880	4670	5480	25600	39500	12800	5920	3540	3040	3370	3280
22	2830	2730	4670	5270	25600	35800	12000	6380	3540	2960	3540	3720
23	2830	2580	4670	5920	28800	34000	12400	8750	3540	2880	3540	4000
24	2830	2730	4670	6850	34000	35800	13300	14700	3540	2960	3370	3820
25	2830	3040	4480	8160	37600	34000	12800	12000	3370	3040	3540	3200
26	2830	3200	4290	7880	38600	32200	12800	10800	3040	3200	3720	3370
27	2830	3370	4290	6380	35800	31400	12800	9380	2880	3370	3720	3540
28	2830	3720	4100	5480	37600	30500	10800	9380	2730	3370	3540	3540
29	2830	....	3720	5270	45200	26400	9710	8750	2580	3370	3540	3370
30	2830	....	3540	5480	53100	26400	8450	8160	2580	3370	3370	3370
31	2830	....	3540	....	56100	....	9060	8450	....	3370	....	3370
Total	85730	79330	126200	148540	867990	1583000	454220	238210	146600	94620	102320	101570
Mean	2770	2830	4070	4950	28000	52800	14700	7680	4890	3050	3410	3280
Max	....	3720	4860	8160	56100	81100	25600	14700	9710	3370	3720	4000
Min	....	2580	2880	3200	6380	26400	8450	5060	2580	2730	3040	2880
Acre-ft.	170000	157000	250000	295000	1720000	3140000	904000	472000	291000	188000	203000	202000

Colorado River at Fruita for 1922.

Drainage Area, 16,800 Square Miles. Altitude, 4,500 Feet Above Sea Leved.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3370	2200	2600	4290	19400	43200	14700	4860	3040	....	....	....
2	3370	2200	2600	3910	20000	35800	13700	4860	3040	....	....	....
3	3370	2200	2600	3910	21300	33100	13300	5060	3370	....	....	....
4	3540	2200	2600	4670	23300	33100	12400	5270	3720	....	....	....
5	3200	2200	2600	5060	24000	34000	11200	4670	3370	....	....	....
6	3040	2200	2600	5920	31400	32200	9710	4480	3200	....	....	....
7	3040	2200	2660	6850	39500	36700	9380	4290	3200	....	....	....
8	3040	2200	2580	7100	42300	39500	8450	3450	3040	....	....	....
9	3040	2200	2580	6380	39500	42300	8450	3540	2730	....	....	....
10	2400	2200	2580	5270	32200	41400	8160	2880	2730	....	....	....
11	2400	2250	2730	4670	27200	41400	7880	2880	2580	....	....	....
12	2400	2250	2580	4480	20000	37600	7880	2880	2580	....	....	....
13	2400	2250	2730	4290	17700	36700	7100	2880	2440	....	....	....
14	2400	2250	2800	3720	17200	38600	6380	2880	2440	....	....	....
15	2400	2250	3040	4290	16600	37600	6150	2880	2300	....	....	....
16	2400	2250	3460	4860	16200	34000	5700	2300	2300	....	....	....
17	2400	2250	4580	5480	16200	28800	5480	3540	2300	....	....	....
18	2400	2250	5700	4100	21300	27200	5060	3200	2300	....	....	....
19	2400	2250	4380	3910	26400	27200	4860	3720	2300	....	....	....
20	2400	2250	3910	3910	29600	26400	4670	4290	2170	....	....	....
21	2250	2800	4100	3910	34900	26400	4670	4670	1980	....	....	....
22	2250	2800	4290	5480	34900	25600	4480	4290	1980	....	....	....
23	2250	2800	4760	6850	35800	24000	4480	4480	1980	....	....	....
24	2250	2800	6150	7880	39500	22600	4290	4290	1980	....	....	....
25	2250	2800	5700	9710	45200	22600	4290	3720	1860	....	....	....
26	2250	2800	5480	12400	47100	21300	4290	3540	1980	....	....	....
27	2250	2800	5270	12000	49100	18800	3540	3200	2100	....	....	....
28	2250	2800	4860	11200	51100	17700	3370	3200	1980	....	....	....
29	2250	....	4580	13300	53100	16600	3540	3040	1980	....	....	....
30	2250	....	4290	16600	51100	15700	4480	3200	1980	....	....	....
31	2250	....	4380	....	49100	....	4860	3540	....	....	....	....
Total	80160	66900	115770	196400	992200	981000	216900	116070	74950	....	....	....
Mean	2590	2390	3730	6550	32000	30600	7000	3740	2500	....	....	....
Max	3540	....	6150	16600	53100	43200	14700	5270	3720	....	....	....
Min	....	....	....	3720	16200	15700	3370	2300	1860	....	....	....
Acre-ft	159000	133000	229000	390000	1970000	1820000	430000	230000	149000	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Fraser River near Arrow for 1921.

Drainage Area, 29 Square Miles. Altitude, 9,500 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	7	13	15	281	162	52	38	19	23	13
2	....	....	7	13	15	281	157	49	36	18	21	13
3	....	....	8	14	16	323	142	45	34	17	18	13
4	....	....	8	14	17	323	127	42	32	17	17	12
5	....	....	9	15	17	337	120	40	31	16	18	11
6	....	....	9	15	16	340	110	39	30	16	20	13
7	....	....	10	15	17	323	105	38	30	19	23	13
8	....	....	10	15	17	327	101	36	29	18	13	15
9	....	....	10	16	17	381	99	35	27	18	12	12
10	....	....	11	16	25	429	96	35	25	16	11	10
11	....	....	11	18	33	453	94	35	24	16	13	11
12	....	....	11	18	51	473	96	35	24	16	18	12
13	....	....	11	15	73	441	92	35	23	16	16	13
14	....	....	12	14	85	417	90	37	22	16	15	10
15	....	....	12	14	92	453	88	35	22	15	13	7
16	....	....	12	14	92	373	85	32	22	14	13	4
17	....	....	11	14	108	337	84	28	22	14	10	5
18	....	....	11	14	100	300	80	26	22	14	9	6
19	....	....	11	15	100	271	80	25	22	14	8	7
20	....	....	12	14	103	229	73	25	21	14	10	8
21	....	....	12	16	97	210	72	27	20	14	12	8
22	....	....	12	15	150	204	71	30	20	14	15	7
23	....	....	12	14	202	213	70	33	19	14	11	7
24	....	....	12	14	235	218	69	33	19	15	15	6
25	....	....	12	14	268	227	65	37	19	15	9	7
26	....	....	11	13	271	215	64	36	19	17	17	7
27	....	....	11	13	265	204	58	39	18	21	20	7
28	....	....	12	13	291	194	55	46	18	21	23	7
29	....	....	12	14	307	177	50	43	18	15	15	7
30	....	....	12	14	271	170	45	42	18	15	12	7
31	....	....	12	....	294	....	50	39	....	17	....	6
Total	217	168	333	436	3660	9124	2750	1129	724	501	450	284
Mean	7	6	10.7	14.5	118	304	88.7	36.4	24.1	16.2	15.0	9.2
Max	....	....	12	18	307	473	162	52	38	21	23	15
Min	....	....	7	13	15	170	45	25	18	14	8	4
Acre-ft.	430	333	658	863	7260	18100	5450	2240	1430	996	893	566

Discharge of Fraser River near Arrow for 1922.

Drainage Area, 29 Square Miles. Altitude, 9,500 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6	6	6	3	14	169	90	31	25	....	....	....
2	7	6	6	3	21	169	77	33	26	....	....	....
3	6	6	6	3	21	169	70	30	25	....	....	....
4	5	6	6	8	18	160	69	30	24	....	....	....
5	5	6	6	3	48	185	67	30	24	....	....	....
6	5	8	6	7	48	180	74	26	23	....	....	....
7	5	7	3	7	54	200	65	25	22	....	....	....
8	5	7	3	8	65	221	60	24	20	....	....	....
9	5	8	6	6	59	232	58	24	18	....	....	....
10	5	8	6	8	43	232	55	23	17	....	....	....
11	6	8	3	8	38	224	52	24	17	....	....	....
12	6	8	3	3	25	229	50	22	16	....	....	....
13	6	8	3	6	23	267	47	22	16	....	....	....
14	6	7	6	6	21	252	46	22	16	....	....	....
15	6	6	6	7	21	210	45	23	16	....	....	....
16	6	6	6	8	21	180	43	23	16	....	....	....
17	6	6	6	7	59	166	41	24	15	....	....	....
18	6	6	6	6	59	163	37	30	15	....	....	....
19	6	6	8	6	71	156	36	28	14	....	....	....
20	6	6	8	6	92	158	36	27	14	....	....	....
21	7	6	8	4	85	150	40	30	14	....	....	....
22	7	6	6	8	116	139	37	33	14	....	....	....
23	7	6	3	8	169	135	36	33	14	....	....	....
24	7	6	3	8	142	131	35	31	14	....	....	....
25	7	6	6	8	188	125	34	32	14	....	....	....
26	7	6	3	8	208	115	32	31	13	....	....	....
27	7	6	7	8	219	104	33	28	13	....	....	....
28	7	6	6	8	230	97	36	27	14	....	....	....
29	7	....	3	8	230	95	37	30	14	....	....	....
30	7	....	3	8	188	97	30	29	14	....	....	....
31	7	....	8	....	178	....	28	26	....	....	....	....
Total	191	183	165	195	2774	5110	1496	851	517	....	....	....
Mean	6.2	6.5	5.3	6.5	89.5	170	48.3	27.5	17.2	....	....	....
Max	....	8	8	8	230	267	90	33	26	....	....	....
Min	....	6	3	3	14	95	28	22	13	....	....	....
Acre-ft.	381	361	326	387	5500	10100	2970	1690	1020	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Williams Fork River near Parshall for 1921.

Drainage Area, 185 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	40	33	46	81	149	1140	645	185	158	79	81	72
2........	40	33	51	81	178	1090	600	188	151	86	81	63
3........	40	33	54	95	242	1140	592	180	138	86	81	63
4........	40	33	66	103	295	1200	560	162	136	84	81	66
5........	40	33	81	103	362	1200	536	158	128	82	82	70
6........	40	33	60	67	436	1260	478	162	121	81	81	58
7........	40	33	68	79	415	1200	457	153	121	95	76	58
8........	40	33	57	72	295	1320	422	145	119	100	71	64
9........	40	33	58	84	271	1320	387	145	123	95	81	65
10........	40	33	64	72	242	1380	380	140	128	88	79	66
11........	40	33	68	93	242	1440	356	140	128	84	79	69
12........	40	33	76	103	278	1380	387	138	121	79	69	77
13........	40	33	67	90	338	1320	356	170	115	82	74	71
14........	40	33	63	99	362	1260	374	165	109	82	72	66
15........	40	33	72	78	380	1320	350	147	107	79	64	55
16........	39	33	66	60	450	1090	307	162	107	77	60	51
17........	39	33	81	86	485	1040	299	149	107	79	64	47
18........	39	33	72	93	584	980	303	136	109	77	64	46
19........	39	33	88	99	544	830	320	134	107	77	61	50
20........	39	33	105	119	436	735	274	136	93	79	58	58
21........	39	33	92	111	499	690	256	158	97	79	58	57
22........	39	33	79	103	584	735	264	158	101	77	66	57
23........	39	33	88	111	600	780	264	168	105	77	71	58
24........	39	33	84	130	690	780	226	162	105	82	71	52
25........	39	33	88	119	780	735	211	151	99	91	77	50
26........	39	33	68	111	735	735	214	136	93	91	63	54
27........	39	33	54	111	690	735	203	145	93	88	60	57
28........	39	33	51	105	880	717	188	136	90	93	69	58
29........	39	....	68	103	980	690	185	140	84	89	71	55
30........	39	....	72	123	1090	690	172	158	84	81	76	55
31........	39	....	72	....	1140	....	162	162	....	76	....	54
Total	1224	924	2179	2884	15652	30932	10728	4769	3377	2595	2141	1842
Mean..	39.5	33	70.3	96.1	505	1030	346	154	113	83.7	71.4	59.4
Min.....	....	....	46	60	149	690	162	134	84	76	58	46
Max.	....	....	105	130	1140	1440	645	188	158	100	82	77
Acre-ft.	2430	1830	4320	5720	31100	61300	21300	9470	6720	5150	4250	3650

Discharge of Williams Fork River near Parshall for 1922.

Drainage Area, 185 Square Miles. Altitude, 7,800 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	51	34	38	51	155	548	316	128	89	....	....	....
2........	50	34	38	52	142	548	285	173	84	....	....	....
3........	45	34	38	63	167	540	260	124	82	....	....	....
4........	43	34	38	74	176	472	252	113	77	....	....	....
5........	43	34	38	77	210	508	248	109	68	....	....	....
6........	43	36	38	88	300	564	290	100	66	....	....	....
7........	43	36	38	81	316	628	270	89	66	....	....	....
8........	43	36	40	71	290	700	220	84	64	....	....	....
9........	43	36	51	71	290	740	206	72	57	....	....	....
10........	43	36	61	63	240	740	236	69	54	....	....	....
11........	43	40	45	63	196	700	313	74	54	....	....	....
12........	43	40	50	61	167	700	192	69	55	....	....	....
13........	43	40	44	52	152	740	176	71	54	....	....	....
14........	43	40	48	42	148	740	158	77	50	....	....	....
15........	43	40	39	68	142	740	138	88	55	....	....	....
16........	32	40	41	54	132	660	138	86	51	....	....	....
17........	32	40	42	54	155	644	135	91	54	....	....	....
18........	32	38	50	57	232	628	126	135	52	....	....	....
19........	32	38	45	58	248	604	113	120	51	....	....	....
20........	32	36	45	48	280	612	115	113	51	....	....	....
21........	35	35	41	63	340	596	120	105	51	....	....	....
22........	35	37	50	96	295	580	117	104	51	....	....	....
23........	35	37	64	113	346	524	102	100	50	....	....	....
24........	35	41	60	120	418	524	100	95	52	....	....	....
25........	35	38	64	115	516	465	89	100	52	....	....	....
26........	35	38	54	113	564	472	86	82	48	....	....	....
27........	35	39	60	111	644	430	86	79	52	....	....	....
28........	35	37	54	95	628	382	98	81	64	....	....	....
29........	35	....	47	115	652	358	132	76	66	....	....	....
30........	35	....	45	138	660	370	100	93	61	....	....	....
31........	35	....	39	....	596	....	95	86	....	....	....	....
Total	1207	1044	1445	2327	9797	17457	5312	2986	1781	....	....	....
Mean..	38.9	37.3	46.6	77.6	316	582	171	96.3	59.4	....	....	....
Max....	....	....	64	138	660	740	316	173	89	....	....	....
Min.....	....	....	....	42	132	358	86	69	48	....	....	....
Acre-ft.	2390	2070	2870	4620	19400	34600	10500	5920	3530	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Troublesome Creek near Troublesome for 1922.

Drainage Area, 175 Square Miles. Altitude, Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	158	230	11	25	30	....	....	....
2	....	....	....	....	152	214	11	43	26	....	....	....
3	....	....	....	....	167	198	9	38	25	....	....	....
4	....	....	....	....	174	170	12	36	23	....	....	....
5	....	....	....	....	178	155	7	36	20	....	....	....
6	....	....	....	....	238	149	7	34	18	....	....	....
7	....	....	....	....	275	152	10	33	18	....	....	....
8	....	....	....	....	260	149	5	34	19	....	....	....
9	....	....	....	....	260	146	4	34	18	....	....	....
10	....	....	....	....	230	140	6	33	16	....	....	....
11	....	....	....	....	206	128	7	43	16	....	....	....
12	....	....	....	....	186	111	4	38	17	....	....	....
13	....	....	....	....	167	100	3	34	16	....	....	....
14	....	....	....	....	152	100	2	36	18	....	....	....
15	....	....	....	....	138	89	2	33	17	....	....	....
16	....	....	....	....	140	85	2	36	18	....	....	....
17	....	....	....	....	140	74	2	36	17	....	....	....
18	....	....	....	....	198	68	2	38	16	....	....	....
19	....	....	....	....	226	53	1	38	16	....	....	....
20	....	....	....	....	226	44	1	36	16	....	....	....
21	....	....	....	....	246	23	1	39	15	....	....	....
22	....	....	....	....	238	20	3	31	16	....	....	....
23	....	....	....	....	260	19	5	28	16	....	....	....
24	....	....	....	....	280	15	4	26	16	....	....	....
25	....	....	....	....	310	15	2	26	16	....	....	....
26	....	....	....	115	335	10	1	25	16	....	....	....
27	....	....	....	115	325	5	1	23	15	....	....	....
28	....	....	....	118	320	4	8	19	16	....	....	....
29	....	....	....	132	310	7	19	18	16	....	....	....
30	....	....	....	149	290	18	17	26	18	....	....	....
31	....	....	....	....	285	....	19	23	....	....	....	....
Total	....	....	....	629	7070	2691	188	998	540	....	....	....
Mean	....	....	....	126	228	89.7	6.1	32.2	18.0	....	....	....
Max	....	....	....	....	335	230	19	43	30	....	....	....
Min	....	....	....	....	138	4	1	18	15	....	....	....
Acre-ft.	....	....	....	1250	14000	5340	375	1980	1070	....	....	....

Discharge of Blue River at Dillon for 1921.

Drainage Area, 110 Square Miles. Altitude, 8,815 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	43	55	650	496	251	303	77	61	....
2	....	....	....	44	66	750	488	255	287	76	61	....
3	....	....	....	46	95	800	474	255	271	77	61	....
4	....	....	....	48	135	850	438	228	270	76	61	....
5	....	....	....	48	184	875	460	200	240	75	61	....
6	....	....	....	48	224	900	339	160	210	75	61	....
7	....	....	....	50	263	875	331	140	190	75	61	....
8	....	....	....	50	240	900	335	130	160	75	60	....
9	....	....	....	50	178	1000	339	130	128	81	57	....
10	....	....	21	46	140	1020	339	140	120	77	54	....
11	....	....	....	44	128	1020	319	161	110	77	54	....
12	....	....	....	42	126	1050	335	175	105	77	55	....
13	....	....	....	42	148	1000	384	172	100	75	54	....
14	....	....	....	42	175	1000	420	172	100	72	54	....
15	....	....	....	41	311	1020	406	175	100	71	54	....
16	....	....	....	37	331	925	429	178	100	71	54	....
17	....	....	....	38	323	900	393	178	100	74	....	....
18	....	....	....	40	363	875	438	175	100	71	....	....
19	....	....	....	42	331	775	506	170	100	65	....	....
20	....	....	....	43	291	700	371	170	99	65	....	....
21	....	....	....	42	315	586	367	180	98	71	....	....
22	....	....	....	43	375	615	398	220	97	74	....	....
23	....	....	....	48	371	650	398	263	97	71	....	....
24	....	....	....	52	429	620	375	263	93	65	....	....
25	....	....	....	53	452	620	355	263	89	65	....	....
26	....	....	....	50	429	580	331	251	87	63	....	....
27	....	....	....	48	464	542	307	247	84	61	....	....
28	....	....	....	46	498	550	271	311	83	61	....	....
29	....	....	....	47	532	542	251	319	81	61	....	....
30	....	....	....	50	568	501	248	271	78	61	....	....
31	....	....	....	....	625	....	244	295	....	61	....	....
Total	930	728	713	1363	9165	23691	11585	6498	4080	2171	923	....
Mean	30	26	23	45.4	296	790	374	210	136	70.0	57.7	....
Max	....	....	....	53	625	1050	506	319	303	81	61	....
Min	....	....	....	37	55	501	244	130	78	61	54	....
Acre-ft.	1840	1440	1410	2700	18200	47000	23000	12900	8090	4300	1830	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Blue River at Dillon for 1922.

Drainage Area, 110 Square Miles. Altitude, 8,815 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	46	91	341	239	146	88	....	....	....
2	....	....	....	50	103	305	236	184	86	....	....	....
3	....	....	....	54	109	305	218	209	83	....	....	....
4	....	....	....	60	114	298	204	164	83	....	....	....
5	....	....	....	62	127	287	201	151	82	....	....	....
6	....	....	....	65	151	320	198	138	82	....	....	....
7	....	....	....	56	189	361	198	131	81	....	....	....
8	....	....	....	51	195	422	182	121	78	....	....	....
9	....	....	....	50	186	460	172	114	76	....	....	....
10	....	....	....	49	174	443	198	111	72	....	....	....
11	....	....	....	45	146	404	206	116	71	....	....	....
12	....	....	....	46	131	409	172	109	69	....	....	....
13	....	....	....	46	123	417	160	104	67	....	....	....
14	....	....	....	48	120	447	140	102	67	....	....	....
15	....	....	....	48	116	422	136	103	66	....	....	....
16	....	....	....	49	114	374	134	103	65	....	....	....
17	....	....	....	49	109	341	134	103	64	....	....	....
18	....	....	....	49	118	336	127	103	64	....	....	....
19	....	....	....	49	146	345	121	103	63	....	....	....
20	....	....	....	48	162	345	118	104	62	....	....	....
21	....	....	....	51	176	336	118	111	62	....	....	....
22	....	....	....	56	204	336	120	108	61	....	....	....
23	....	....	....	62	212	320	116	109	61	....	....	....
24	....	....	....	68	251	312	108	106	60	....	....	....
25	....	....	....	70	298	294	103	102	60	....	....	....
26	....	....	....	72	353	284	98	97	60	....	....	....
27	....	....	....	72	400	280	98	92	60	....	....	....
28	....	....	....	71	387	258	103	90	60	....	....	....
29	....	....	....	76	396	242	120	87	60	....	....	....
30	....	....	....	83	430	245	164	86	61	....	....	....
31	....	....	....	....	400	....	140	91	....	....	....	....
Total	....	....	....	1701	6231	10289	4782	3598	2074	....	....	....
Mean	....	....	....	56.7	201	343	154	116	69.1	....	....	....
Max	....	....	....	83	430	460	239	209	88	....	....	....
Min	....	....	....	45	91	242	98	86	60	....	....	....
Acre-ft.	....	....	....	3370	12400	20400	9470	7130	4110	....	....	....

Discharge of Eagle River at Redcliff for 1921.

Drainage Area, 64 Square Miles. Altitude, 8,598 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10	12	12	10	52	580	140	....	....	20	22	19
2	10	12	12	11	59	500	122	....	....	19	22	19
3	10	12	12	14	92	450	125	....	....	19	22	19
4	11	12	12	14	156	495	125	....	....	19	22	17
5	12	12	14	14	206	520	133	....	....	19	22	19
6	12	12	14	14	193	490	102	....	....	10	19	19
7	12	12	12	14	168	450	83	....	....	9	19	19
8	12	12	12	14	206	500	92	....	....	10	19	19
9	12	12	12	14	180	650	83	....	....	12	20	19
10	10	12	8	14	180	700	....	....	....	11	19	19
11	12	13	8	15	193	600	....	....	....	18	19	19
12	12	14	7	18	156	500	....	....	....	19	19	19
13	12	15	8	20	180	444	....	....	....	19	19	19
14	10	16	8	22	168	450	....	....	....	20	19	17
15	10	12	8	25	206	480	....	....	....	22	19	19
16	12	10	11	25	274	440	....	....	....	22	19	16
17	12	10	12	22	333	400	....	....	....	23	19	14
18	12	10	12	22	364	360	....	....	....	24	19	12
19	12	8	12	24	303	340	....	....	....	22	19	10
20	12	8	12	25	180	300	....	....	....	22	19	7
21	12	8	14	25	246	246	....	....	....	22	19	6
22	12	8	34	25	411	219	....	....	....	22	19	7
23	12	8	16	32	460	200	....	....	....	22	19	6
24	12	10	16	41	444	168	....	....	....	23	19	8
25	12	12	11	41	427	168	....	....	16	22	19	10
26	12	10	15	38	478	144	....	....	16	22	19	10
27	12	12	12	35	395	168	....	....	16	22	19	12
28	10	10	10	30	495	180	....	....	16	22	19	12
29	12	....	25	24	550	168	....	....	16	22	19	14
30	12	....	16	36	600	168	....	....	16	22	19	14
31	12	....	10	....	620	....	....	....	....	22	....	14
Total	357	314	397	678	8975	11478	2573	1333	1170	602	586	453
Mean	11.5	11.2	12.8	22.6	290	383	83	43	39	19.4	19.5	14.6
Max	....	16	34	41	620	700	....	....	....	24	22	19
Min	....	8	7	10	52	144	....	....	....	9	19	6
Acre-ft.	707	622	787	1340	17800	22800	5100	2640	2320	1190	1160	898

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Eagle River at Redcliff for 1922.

Drainage Area, 64 Square Miles. Altitude, 8,598 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15	12	12	15	110	272	88	48	25	....	....	....
2	15	12	14	17	104	240	85	60	24	....	....	....
3	15	12	15	22	104	240	78	54	24	....	....	....
4	15	12	15	22	117	224	74	40	24	....	....	....
5	15	12	12	26	110	224	72	31	24	....	....	....
6	15	12	14	26	145	256	72	31	22	....	....	....
7	15	12	15	26	167	256	70	32	20	....	....	....
8	15	12	12	26	158	256	62	27	19	....	....	....
9	15	12	12	26	158	256	70	26	19	....	....	....
10	15	12	14	26	145	256	83	26	19	....	....	....
11	15	12	15	26	150	224	65	27	19	....	....	....
12	15	12	15	26	131	224	57	24	18	....	....	....
13	15	12	15	26	118	224	53	24	17	....	....	....
14	15	12	15	26	105	224	49	23	17	....	....	....
15	15	14	15	25	92	196	48	24	16	....	....	....
16	15	15	17	26	112	154	43	58	15	....	....	....
17	15	12	17	26	136	154	39	69	15	....	....	....
18	15	15	14	30	145	154	40	53	15	....	....	....
19	14	15	15	30	145	154	38	43	15	....	....	....
20	12	16	15	26	150	145	38	30	15	....	....	....
21	12	14	17	30	150	142	50	27	15	....	....	....
22	12	15	19	40	150	135	42	30	15	....	....	....
23	12	12	22	50	167	128	38	29	16	....	....	....
24	12	14	22	68	189	123	33	28	15	....	....	....
25	12	15	22	68	286	115	29	28	17	....	....	....
26	12	14	19	68	324	109	28	24	16	....	....	....
27	12	15	18	74	361	104	26	24	17	....	....	....
28	12	12	17	74	400	95	31	22	17	....	....	....
29	12	....	16	68	380	92	51	22	15	....	....	....
30	12	....	15	80	361	90	34	24	16	....	....	....
31	12	....	15	....	324	....	39	24	....	....	....	....
Total	428	366	490	1119	5694	5466	1625	1032	541	....	....	....
Mean	13.8	13.1	15.8	37.3	184	182	52.4	33.3	18.0	....	....	....
Max	15	16	22	80	400	272	88	69	25	....	....	....
Min	12	12	12	15	92	90	26	22	15	....	....	....
Acre-ft.	848	728	972	2220	11300	10800	3220	2050	1070	....	....	....

Discharge of Eagle River at Eagle for 1921.

Drainage Area, 630 Square Miles. Altitude, 6,558 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	95	95	185	163	366	4430	2080	582	760	200	175	144
2	95	95	191	168	450	4070	2080	720	1150	209	170	142
3	95	95	183	188	617	4070	1930	624	1150	209	164	132
4	95	95	230	210	850	4070	1580	522	760	203	164	110
5	95	95	239	250	1150	4430	1510	474	624	197	162	135
6	95	95	185	226	1440	4610	1320	444	596	194	154	159
7	95	95	173	202	1510	4430	1260	400	522	192	147	132
8	95	95	163	199	1150	3890	1320	364	492	194	147	132
9	95	95	156	188	895	4610	1320	334	450	186	140	132
10	95	95	156	193	760	5360	1320	334	366	183	137	132
11	105	105	161	213	645	5550	1320	312	321	180	144	152
12	105	105	159	246	680	5740	1320	300	312	175	144	152
13	105	105	175	239	940	4790	1380	283	296	170	147	152
14	105	105	168	250	1150	4980	1510	317	276	167	159	152
15	105	105	175	268	1580	5550	1440	405	264	164	159	152
16	105	105	173	205	1710	4790	1320	385	250	159	157	134
17	105	105	173	253	1710	4430	1100	361	243	159	152	134
18	105	105	178	233	2000	4250	1040	312	233	159	147	134
19	105	105	193	253	1860	3030	1150	287	250	154	142	134
20	105	105	207	308	1440	2710	940	287	239	149	162	134
21	105	125	180	296	1640	2390	850	325	226	147	149	134
22	105	125	171	276	2000	2550	1040	400	213	144	144	134
23	105	125	223	317	2470	2870	990	550	208	144	142	134
24	105	125	191	385	2790	2870	895	700	202	149	140	132
25	105	125	180	330	2950	2710	805	700	199	175	147	144
26	105	125	178	283	2870	2550	805	650	199	167	142	144
27	105	175	159	257	2550	2550	673	600	191	170	132	142
28	105	180	166	239	3370	2390	596	659	183	172	130	135
29	105	....	161	226	4070	2390	561	673	180	172	137	132
30	105	....	185	276	4430	2230	510	645	178	175	142	130
31	105	....	161	....	4610	....	486	624	....	172	....	137
Total	3105	3105	5578	7340	56653	115290	36451	14573	11533	5390	4478	4278
Mean	100	111	180	245	1830	3840	1180	470	384	174	149	138
Max	....	....	239	385	4610	5740	2080	720	1150	209	175	....
Min	....	....	156	163	366	2230	486	283	178	144	130	.....
Acre-ft.	6150	6160	11100	14600	113000	228000	72600	28900	22800	10700	8870	8480

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Eagle River at Eagle for 1922.

Drainage Area, 630 Square Miles. Altitude, 6,558 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	130	108	115	144	721	2290	1200	610	364	....	....	....
2	132	108	147	152	770	2220	1110	735	380	....	....	....
3	137	108	142	164	805	2360	1030	791	360	....	....	....
4	130	108	130	189	848	2140	1020	679	340	....	....	....
5	117	108	116	223	892	2290	1000	520	321	....	....	....
6	112	108	116	226	1220	2760	968	452	302	....	....	....
7	115	110	116	194	1580	2840	945	404	283	....	....	....
8	132	135	116	200	1510	3470	848	369	264	....	....	....
9	140	144	116	216	1400	3470	855	343	245	....	....	....
10	120	132	153	192	1170	3280	1050	332	226	....	....	....
11	120	123	153	172	975	3020	878	338	223	....	....	....
12	120	121	153	189	855	3020	763	300	212	....	....	....
13	120	119	153	175	784	3020	714	274	203	....	....	....
14	120	121	186	162	721	2520	672	282	194	....	....	....
15	120	119	186	175	742	2080	686	282	189	....	....	....
16	120	121	186	180	728	1950	700	286	180	....	....	....
17	120	126	186	164	784	1950	650	380	177	....	....	....
18	104	128	180	154	1130	2140	630	610	177	....	....	....
19	104	121	183	152	1490	2140	630	513	172	....	....	....
20	104	135	186	162	1540	2140	600	470	167	....	....	....
21	104	108	223	177	1880	2080	580	422	162	....	....	....
22	104	108	270	233	1600	2010	552	410	157	....	....	....
23	104	108	270	296	1760	1760	506	392	152	....	....	....
24	104	108	255	386	2290	1820	476	343	149	....	....	....
25	104	108	192	446	2760	1720	440	322	149	....	....	....
26	104	108	180	482	3190	1580	392	300	152	....	....	....
27	104	108	180	464	3470	1460	375	282	154	....	....	....
28	104	108	154	500	3570	1270	386	282	154	....	....	....
29	104	....	149	428	3570	1280	470	262	159	....	....	....
30	104	....	144	578	3470	1320	470	291	157	....	....	....
31	104	....	132	....	2930	....	446	314	....	....	....	....
Total	3561	3267	5168	7575	51155	67400	22042	12590	6524	....	....	....
Mean	115	117	167	252	1650	2250	711	406	217	....	....	....
Max	....	144	270	578	3570	3470	1200	791	380	....	....	....
Min	....	....	....	144	721	1270	375	262	149	....	....	....
Acre-ft.	7070	6500	10300	15000	101000	134000	43700	25000	12900	....	....	....

Discharge of Turkey Creek at Redcliff for 1921.

Drainage Area, 27 Square Miles. Altitude, 8,598 Feet Above Sea Leved.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4	4	7	6	17	310	80	38	13	....	....	....
2	4	4	6	8	20	300	77	36	10	....	....	....
3	4	5	5	9	26	290	75	34	9	....	....	....
4	4	5	7	12	34	290	65	33	9	....	....	....
5	4	5	7	17	47	300	56	32	9	....	....	....
6	4	4	7	16	52	340	49	30	9	....	....	....
7	4	4	7	12	49	300	49	29	9	....	....	....
8	4	4	6	10	37	285	53	26	9	....	....	....
9	4	4	6	8	29	310	53	26	9	....	....	....
10	4	4	6	7	26	350	49	25	9	....	....	....
11	5	5	6	8	28	420	59	23	9	....	....	....
12	5	6	6	10	28	380	52	22	8	....	....	....
13	5	6	5	12	30	375	54	20	8	....	....	....
14	5	6	6	15	39	405	53	20	8	....	....	....
15	5	6	6	17	51	370	49	18	8	....	....	....
16	5	6	6	15	61	340	48	16	8	....	....	....
17	4	5	6	13	75	320	47	15	8	....	....	....
18	4	5	7	12	84	230	48	13	8	....	....	....
19	5	5	7	14	85	180	47	14	8	....	....	....
20	4	5	7	16	71	150	46	13	8	....	....	....
21	4	5	7	16	79	160	45	11	8	....	....	....
22	5	5	7	15	79	169	47	16	8	....	....	....
23	5	5	7	19	118	174	46	14	8	....	....	....
24	5	6	8	18	104	155	46	14	8	....	....	....
25	4	6	7	17	91	142	44	12	8	....	....	....
26	4	6	7	16	98	141	43	11	8	....	....	....
27	4	6	7	16	104	111	45	10	8	....	....	....
28	4	6	7	15	98	106	45	10	7	....	....	....
29	4	....	7	15	148	96	42	10	7	....	....	....
30	4	....	7	17	197	86	43	10	7	....	....	....
31	4	....	7	....	250	....	40	10	....	....	....	....
Total	134	143	204	401	2255	7585	1595	611	253	....	....	....
Mean	4.3	5.1	6.6	13.4	72.7	253	51.5	19.7	8.4	....	....	....
Max	....	6	8	19	250	420	80	38	13	....	....	....
Min	....	4	5	6	17	86	40	10	7	....	....	....
Acre-ft.	264	283	406	797	4470	15100	3170	1210	500	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork River at Aspen for 1921.

Drainage Area, 109 Square Miles. Altitude, 7,931 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	54	56	34	47	84	845	670	181	178	....	....	....
2	26	55	41	49	101	845	620	164	154	....	....	....
3	54	50	53	56	130	910	500	158	142	....	....	....
4	54	54	66	60	154	910	535	154	120	....	....	....
5	54	56	49	60	218	910	535	138	112	....	....	....
6	54	54	49	56	257	910	375	122	105	....	....	....
7	54	48	48	63	237	785	362	108	105	....	....	....
8	54	45	50	49	75	1430	388	112	96	....	....	....
9	52	48	50	62	91	1350	362	108	91	....	....	....
10	50	48	59	49	132	1590	375	110	84	....	....	....
11	50	54	58	60	133	1830	375	100	80	....	....	....
12	54	50	49	58	148	1590	375	94	77	....	....	....
13	49	49	51	67	140	1590	518	94	75	....	....	....
14	49	56	49	58	133	2230	500	126	69	....	....	....
15	54	50	58	58	325	1990	448	121	66	....	....	....
16	51	54	62	60	300	2310	415	114	66	....	....	....
17	44	52	64	63	325	1430	350	103	64	....	....	....
18	54	50	68	63	300	1120	338	98	66	....	....	....
19	51	48	72	63	278	725	312	87	84	....	....	....
20	54	49	49	67	257	725	278	98	68	....	....	....
21	62	49	54	68	257	845	289	121	64	....	....	....
22	56	49	58	62	362	845	289	128	64	....	....	....
23	54	49	62	77	375	785	268	197	54	....	....	....
24	52	54	58	64	415	725	268	179	59	....	....	....
25	50	52	60	58	400	725	237	167	53	....	....	....
26	48	50	63	60	388	785	237	146	53	....	....	....
27	51	49	43	60	350	845	289	136	56	....	....	....
28	54	49	49	58	535	845	257	156	54	....	....	....
29	54	....	56	63	910	670	268	132	53	....	....	....
30	54	....	51	70	910	670	164	151	53	....	....	....
31	54	....	41	....	910	....	190	132	....	....	....	....
Total	1605	1427	1674	1808	9630	33765	11387	4035	2465	....	....	....
Mean	51.8	51.0	54.0	60.3	311	1130	367	130	82.2	....	....	....
Max	62	56	72	77	910	2310	670	197	178	....	....	....
Min	26	45	34	47	75	670	164	87	53	....	....	....
Acre-ft.	3190	2830	3320	3590	19100	67200	22600	7990	4890	....	....	....

Discharge of Roaring Fork at Glenwood Springs for 1921.

Drainage Area, 1,450 Square Miles. Altitude, 5,747 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	430	365	450	500	1030	6860	5480	1900	1840	696	626	588
2	430	365	500	528	1280	6600	5980	2020	2090	720	605	494
3	430	382	550	577	1660	6860	6100	1840	1720	704	591	482
4	424	394	600	633	2090	6350	4910	1600	1490	696	584	440
5	412	382	528	696	2570	7120	4480	1550	1380	680	570	410
6	412	370	493	648	3120	7380	3500	1490	1290	680	570	395
7	418	365	458	598	2870	7640	2950	1440	1220	696	556	390
8	382	330	418	570	2220	6860	3000	1360	1180	704	542	400
9	340	345	458	556	1840	8730	2950	1310	1130	696	514	435
10	394	382	465	556	1660	10200	3300	1320	1080	680	500	488
11	444	360	472	584	1600	10700	3120	1260	1060	664	514	488
12	430	355	444	633	1780	12700	3490	1230	990	656	514	500
13	430	365	465	640	2220	14700	3880	1200	945	648	514	500
14	458	388	479	656	2720	17300	3980	1300	909	648	514	488
15	493	400	507	688	3210	16000	3780	1380	891	648	507	494
16	514	355	500	605	3680	16700	3400	1340	873	640	440	458
17	500	355	521	656	3580	12500	3120	1310	864	626	425	385
18	451	388	542	633	3580	8450	2950	1190	855	619	400	390
19	458	365	584	680	3040	6860	2950	1160	891	598	430	400
20	424	394	577	756	2500	6350	2720	1170	846	591	494	415
21	382	388	535	756	2720	5850	2500	1270	828	577	494	425
22	360	376	521	720	3210	5850	2570	1440	819	570	482	420
23	424	370	563	837	3680	6860	2430	1840	810	570	494	400
24	430	370	528	909	4080	6350	2500	1840	792	591	494	395
25	370	376	514	855	4380	6100	2360	1960	765	640	507	370
26	365	394	542	774	3780	6100	2290	1720	738	626	500	390
27	406	412	493	720	3580	6100	2160	1540	720	626	488	415
28	400	410	472	704	4800	5980	1960	1600	712	640	470	435
29	376	....	479	688	6100	5850	1840	1490	704	640	476	440
30	330	....	500	828	7120	5720	1720	1660	688	640	488	440
31	394	....	479	....	7380	....	1720	1600	....	626	....	440
Total	12911	10501	15637	20184	99080	257620	100090	46330	31120	20036	15303	13610
Mean	416	375	504	673	3200	8590	3230	1490	1040	646	510	439
Max	514	412	600	909	7380	17300	6100	2020	2090	720	626	588
Min	330	330	418	500	1030	5720	1720	1160	688	570	400	370
Acre-ft.	25600	20800	31000	40000	197000	511000	199000	91600	61900	39700	30300	27000

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roaring Fork at Glenwood Springs for 1922.

Drainage Area, 1,450 Square Miles. Altitude, 5,747 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	440	375	385	540	2000	3400	3740	1590	1030	....	....	....
2........	440	370	385	603	2050	3300	3570	1590	1000	....	....	....
3........	405	370	405	632	2300	3180	3400	1620	1030	....	....	....
4........	380	370	427	685	2420	3110	3210	1410	1080	....	....	....
5........	365	370	439	670	2780	3120	3010	1270	1090	....	....	....
6........	390	380	410	719	3780	4700	2860	1190	1020	....	....	....
7........	430	340	410	648	4480	6200	2710	1080	990	....	....	....
8........	440	528	439	640	4260	7750	2620	950	960	....	....	....
9........	430	500	415	678	3880	9000	2540	935	960	....	....	....
10........	425	446	427	625	3000	7200	2700	930	940	....	....	....
11........	420	410	445	582	2390	7200	2490	950	890	....	....	....
12........	425	405	433	618	2070	7720	2270	970	870	....	....	....
13........	430	395	439	596	1900	7980	2100	960	842	....	....	....
14........	430	400	451	589	1840	8520	1960	970	815	....	....	....
15........	440	360	501	603	1840	7200	1900	950	788	....	....	....
16........	440	400	540	632	1850	5820	1840	1280	779	....	....	....
17........	430	395	719	603	2100	5820	1710	1270	779	....	....	....
18........	415	390	632	575	2610	5770	1650	1240	762	....	....	....
19........	405	405	527	561	3350	5710	1590	1250	736	....	....	....
20........	380	435	561	603	3950	5660	1590	1230	719	....	....	....
21........	390	476	596	694	4500	5600	1590	1210	702	....	....	....
22........	400	452	685	930	5240	5510	1540	1260	694	....	....	....
23........	410	390	744	1160	5850	5480	1490	1210	685	....	....	....
24........	415	375	719	1410	6700	5460	1450	1160	685	....	....	....
25........	425	370	640	1480	7600	5580	1400	1100	685	....	....	....
26........	435	380	625	1590	8040	5250	1350	1060	685	....	....	....
27........	435	375	640	1580	8520	5020	1290	1020	694	....	....	....
28........	430	370	575	1490	9000	4770	1270	990	710	....	....	....
29........	420	....	547	1610	8800	4400	1360	1040	710	....	....	....
30........	400	....	540	1760	6700	4050	1400	1110	702	....	....	....
31........	390		520	....	3980	....	1480	1060	....	....	....	....
Total	12910	11232	16221	26106	129780	169480	65080	35855	25032	....	....	....
Mean..	416	401	523	870	4190	5650	2100	1160	834	....	....	....
Max....	440	528	744	1760	9000	9000	3740	1620	1090	....	....	....
Min....	365	340	385	540	1840	3110	1270	930	685	....	....	....
Acre-ft.	25600	22300	32200	51800	258000	336000	129000	71300	49600	....	....	....

Discharge of Elk Creek at New Castle for 1922.

Drainage Area, 177 Square Miles. Altitude, 5,700 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	....	36	148	1130	308	15	12	....	....	....
2........	....	....	....	47	162	1020	209	15	15	....	....	....
3........	....	....	....	42	193	1020	193	10	21	....	....	....
4........	....	....	....	47	209	884	162	10	21	....	....	....
5........	....	....	....	36	209	918	177	10	21	....	....	....
6........	....	....	....	36	265	1090	162	7.3	28	....	....	....
7........	....	....	....	36	356	1170	148	8.8	28	....	....	....
8........	....	....	....	36	356	1280	122	8.8	28	....	....	....
9........	....	....	....	36	356	1250	99	7.3	28	....	....	....
10........	....	....	....	42	330	1320	99	7.3	28	....	....	....
11........	....	....	....	47	285	1020	88	10	21	....	....	....
12........	....	....	....	42	227	1020	69	7.3	15	....	....	....
13........	....	....	....	47	209	1020	61	7.3	15	....	....	....
14........	....	....	....	36	209	952	54	5.3	15	....	....	....
15........	....	....	....	36	209	884	36	5.3	15	....	....	....
16........	....	....	....	42	209	751	42	5.3	15	....	....	....
17........	....	....	99	42	285	686	36	5.3	15	....	....	....
18........	....	....	110	36	381	686	36	5.3	15	....	....	....
19........	....	....	69	36	381	751	36	6.3	15	....	....	....
20........	....	....	77	36	497	751	28	7.3	15	....	....	....
21........	....	....	61	36	622	718	28	8.8	15	....	....	....
22........	....	....	54	36	654	654	28	7.3	12	....	....	....
23........	....	....	61	42	850	654	28	10	10	....	....	....
24........	....	....	36	47	1020	497	24	7.3	10	....	....	....
25........	....	....	32	54	1090	497	21	7.3	10	....	....	....
26........	....	....	42	61	1130	437	15	7.3	10	....	....	....
27........	....	....	47	77	1320	409	15	5.3	10	....	....	....
28........	....	....	42	77	1360	330	15	5.3	21	....	....	....
29........	....	....	28	77	1320	381	15	5.3	21	....	....	....
30........	....	....	32	99	1250	356	15	6.3	21	....	....	....
31........	....	....	32	....	1210	....	15	10	....	....	....	....
Total	....	....	822	1400	17302	24536	2384	244.4	526	....	....	....
Mean..	....	....	....	46.7	558	818	76.9	7.88	17.5	....	....	....
Max....	....	....	....	99	1360	1320	308	15	28	....	....	....
Min.....	....	....	....	36	148	330	15	5.3	10	....	....	....
Acre-ft.	....	....	1630	2780	34300	48700	4730	485	1040	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Parachute Creek at Grand Valley for 1921.

Drainage Area, 196 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	122	176	28	49	64	15	15	....
2	....	....	....	....	184	166	28	24	26	16	15	....
3	....	....	....	....	280	146	24	18	24	16	15	....
4	....	....	....	....	370	141	24	20	24	16	15	....
5	....	....	....	....	388	127	22	20	20	16	15	....
6	....	....	....	....	381	122	20	20	20	15	15	....
7	....	....	....	64	388	146	20	20	20	15	15	....
8	....	....	....	47	359	127	20	19	19	15	15	....
9	....	....	....	52	292	122	20	15	18	15	15	....
10	....	....	....	49	261	118	20	18	20	15	15	....
11	....	....	....	52	240	111	20	15	19	14	14	....
12	....	....	....	61	231	100	22	15	15	13	13	....
13	....	....	....	61	261	96	18	13	15	13	13	....
14	....	....	....	67	345	96	18	90	15	13	13	....
15	....	....	....	72	406	151	13	24	15	13	13	....
16	....	....	....	67	442	118	13	24	15	13	13	....
17	....	....	....	64	545	118	18	20	15	13	13	....
18	....	....	....	64	499	104	15	20	15	13	13	....
19	....	....	....	72	454	100	15	19	13	13	13	....
20	....	....	....	81	406	100	13	20	13	13	13	....
21	....	....	....	96	352	96	11	26	12	14	13	....
22	....	....	....	96	325	85	15	26	11	15	13	....
23	....	....	....	96	335	78	16	28	11	15	13	....
24	....	....	....	118	325	67	15	52	11	15	13	....
25	....	....	....	111	312	64	16	28	11	15	13	....
26	....	....	....	104	292	49	20	28	11	15	13	....
27	....	....	....	100	270	47	18	28	11	15	13	....
28	....	....	....	96	255	43	15	24	13	15	13	....
29	....	....	....	85	240	43	13	24	15	15	13	....
30	....	....	....	90	225	35	14	22	15	15	13	....
31	....	....	....	....	197	....	15	20	....	15	....	....
Total	....	....	....	1865	9982	3092	559	789	526	449	411	....
Mean	....	....	....	77.7	322	103	18.0	25.5	17.5	14.5	13.7	....
Max	....	....	....	118	545	176	28	90	64	16	15	....
Min	....	....	....	47	122	35	11	13	11	13	13	....
Acre-ft.	....	....	....	3700	19800	6130	1110	1570	1040	892	815	....

Discharge of Parachute Creek at Grand Valley for 1922.

Drainage Area, 196 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	28	26	352	250	36	22	6	....	....	....
2	....	....	20	28	352	250	36	47	6	....	....	....
3	....	....	18	30	388	221	36	36	6	....	....	....
4	....	....	18	39	406	207	36	28	6	....	....	....
5	....	....	18	49	499	172.	36	25	6	....	....	....
6	....	....	18	39	615	155	32	22	6	....	....	....
7	....	....	16	35	700	143	28	22	6	....	....	....
8	....	....	15	39	745	121	28	19	6	....	....	....
9	....	....	15	64	790	121	28	16	6	....	....	....
10	....	....	15	39	745	110	28	16	6	....	....	....
11	....	....	15	37	537	110	27	22	6	....	....	....
12	....	....	15	37	418	90	25	16	6	....	....	....
13	....	....	15	35	436	90	23	16	6	....	....	....
14	....	....	22	37	382	80	22	11	6	....	....	....
15	....	....	30	39	346	80	22	8	6	....	....	....
16	....	....	39	28	382	80	22	14	6	....	....	....
17	....	....	47	28	436	70	17	50	6	....	....	....
18	....	....	30	28	575	70	12	32	6	....	....	....
19	....	....	24	32	705	61	11	16	6	....	....	....
20	....	....	22	39	795	61	11	6	6	....	....	....
21	....	....	26	47	795	61	8	6	6	....	....	....
22	....	....	32	81	660	54	6	6	6	....	....	....
23	....	....	39	100	575	47	6	6	6	....	....	....
24	....	....	47	146	575	47	6	6	6	....	....	....
25	....	....	39	171	535	36	6	6	6	....	....	....
26	....	....	32	197	455	36	6	6	6	....	....	....
27	....	....	47	197	418	36	6	6	6	....	....	....
28	....	....	30	225	400	36	6	6	6	....	....	....
29	....	....	28	286	329	36	6	6	6	....	....	....
30	....	....	30	318	296	36	6	6	6	....	....	....
31	....	....	28	....	280	....	6	6	....	....	....	....
Total	....	....	818	2496	15922	2967	584	510	180	....	....	....
Mean	....	....	26.4	83.2	514	98.9	18.8	16.5	6.0	....	....	....
Max	....	....	47	318	790	250	36	50	6	....	....	....
Min	....	....	15	26	280	36	6	6	6	....	....	....
Acre-ft.	....	....	1620	4950	31600	5880	1160	1010	357	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Roan Creek Near DeBeque for 1921.

Drainage Area, 210 Square Miles. Altitude, 4,935 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	132	404	60	45	72	31	28	....
2	....	....	....	....	181	342	52	41	60	31	28	....
3	....	....	....	....	236	294	52	32	45	28	27	....
4	....	....	....	....	285	264	58	28	43	28	26	....
5	....	....	....	....	386	250	55	27	43	26	26	....
6	....	....	....	....	439	222	51	32	42	26	26	....
7	....	....	....	....	433	208	51	33	39	24	26	....
8	....	....	....	48	427	197	51	31	38	26	26	....
9	....	....	....	50	401	191	46	33	38	26	25	....
10	....	....	....	52	401	181	52	41	35	28	26	....
11	....	....	....	63	386	166	48	39	33	30	26	....
12	....	....	....	63	370	144	50	37	33	29	24	....
13	....	....	....	66	423	146	51	35	33	28	28	....
14	....	....	....	74	459	156	59	33	33	31	26	....
15	....	....	....	66	507	126	80	38	31	31	24	....
16	....	....	....	69	557	121	74	32	31	28	26	....
17	....	....	....	66	581	119	63	34	33	28	22	....
18	....	....	....	63	615	113	56	33	38	29	23	....
19	....	....	....	79	557	119	51	34	38	28	23	....
20	....	....	....	74	507	117	63	37	35	28	25	....
21	....	....	....	82	510	100	74	49	33	28	25	....
22	....	....	....	86	497	104	69	44	33	28	23	....
23	....	....	....	91	478	96	66	44	33	28	23	....
24	....	....	....	100	478	86	60	72	33	35	24	....
25	....	....	....	100	510	82	52	45	31	38	26	....
26	....	....	....	100	510	80	50	37	27	38	26	....
27	....	....	....	96	468	72	45	34	25	33	25	....
28	....	....	....	91	475	66	40	32	24	33	23	....
29	....	....	....	91	455	66	34	39	24	33	20	....
30	....	....	....	100	465	65	32	41	27	33	20	....
31	....	....	....	....	449	....	34	32	....	30	....	....
Total	....	....	....	1770	13578	4697	1679	1164	1083	921	746	....
Mean	....	....	....	77.0	438	157	54.2	37.5	36.1	29.7	24.9	....
Max	....	....	....	100	615	404	80	72	72	38	28	....
Min	....	....	....	48	132	65	32	27	24	24	20	....
Acre-ft.	....	....	....	3510	26900	9340	3330	2310	2150	1830	1480	....

Discharge of Roan Creek Near DeBeque for 1922.

Drainage Area, 210 Square Miles. Altitude, 4,935 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	26	74	465	454	44	17	36	....	....	....
2	....	....	26	89	510	406	58	17	36	....	....	....
3	....	....	26	74	510	360	58	17	49	....	....	....
4	....	....	34	89	610	360	44	10	66	....	....	....
5	....	....	34	89	710	315	44	26	49	....	....	....
6	....	....	26	89	910	272	49	36	36	....	....	....
7	....	....	26	89	960	230	86	36	36	....	....	....
8	....	....	26	89	910	189	66	26	26	....	....	....
9	....	....	19	89	1010	189	66	26	36	....	....	....
10	....	....	26	89	1010	189	49	26	26	....	....	....
11	....	....	34	89	810	189	49	26	26	....	....	....
12	....	....	34	89	710	189	49	26	26	....	....	....
13	....	....	42	74	660	153	49	26	26	....	....	....
14	....	....	61	74	660	122	66	26	26	....	....	....
15	....	....	74	74	660	122	49	26	36	....	....	....
16	....	....	106	74	610	96	49	26	36	....	....	....
17	....	....	172	74	860	75	49	36	36	....	....	....
18	....	....	51	74	970	58	36	36	36	....	....	....
19	....	....	61	89	970	58	26	26	36	....	....	....
20	....	....	61	89	1080	44	26	26	36	....	....	....
21	....	....	89	89	1080	44	26	36	36	....	....	....
22	....	....	89	125	1080	51	36	49	36	....	....	....
23	....	....	89	125	1020	51	36	49	36	....	....	....
24	....	....	89	172	860	32	26	49	36	....	....	....
25	....	....	89	172	860	32	26	49	36	....	....	....
26	....	....	125	204	805	32	26	49	26	....	....	....
27	....	....	106	204	650	22	26	36	26	....	....	....
28	....	....	89	244	650	22	26	49	36	....	....	....
29	....	....	74	288	600	44	26	36	36	....	....	....
30	....	....	74	376	600	44	17	36	36	....	....	....
31	....	....	74	....	550	....	26	36	....	....	....	....
Total	....	....	1952	3659	24350	4444	1309	991	1056	....	....	....
Mean	....	....	63.0	122	785	148	42 2	32.0	35.2	....	....	....
Max	....	....	172	376	1080	454	86	49	66	....	....	....
Min	....	....	19	74	465	22	17	10	26	....	....	....
Acre-ft.	....	....	3870	7260	48300	8810	2590	1970	2090	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Plateau Creek Near Collbran for 1921.

Drainage Area, 88 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1									124	39	29	
2									95	49	26	
3									75	42	29	
4									61	37	27	
5									55	35	26	
6									48	29	23	
7									45	29	23	
8									42	27	21	
9									40	28	20	
10									37	27	23	
11									35	25	27	
12									33	26	26	
13									31	28	25	
14									29	28	23	
15									29	28	23	
16									28	26	23	
17									28	25	22	
18									36	23	23	
19									57	23	25	
20								27	37	23	25	
21								37	32	24	25	
22								47	31	23	26	
23								57	30	23	29	
24								67	38	30	32	
25								77	42	35	35	
26								87	41	27	38	
27								97	39	30	42	
28								129	38	31	42	
29								222	37	29	35	
30								110	37	28	35	
31								113		30		
Total								1070	1330	907	828	
Mean								89.2	44.3	29.3	27.6	29.0
Max									124	35	42	
Min									28	23	20	
Acre-ft.								2120	2640	1800	1640	1780

Discharge of Plateau Creek at Collbran for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				14	219	1700	263	33	14			
2				15	205	1640	219	29	14			
3				17	248	1400	192	28	14			
4				22	296	1250	169	30	14			
5				24	390	1250	148	28	14			
6				22	483	1300	138	25	14			
7				23	570	1350	120	19	14			
8				26	660	1640	96	15	14			
9				28	510	1350	89	15	14			
10				25	370	1250	96	17	14			
11				23	280	1200	76	16	10			
12				20	248	1200	65	13	9.6			
13				20	219	1200	51	12	8.4			
14				19	233	1050	43	12	8.4			
15				18	248	760	40	10	8.0			
16				17	263	690	39	10	7.2			
17				17	370	725	38	15	6.8			
18				16	510	660	35	17	6.0			
19				15	570	570	35	14	6.0			
20				22	660	570	39	16	6.0			
21				34	760	483	44	25	6.0			
22				50	760	483	43	26	6.0			
23				60	955	433	39	17	6.0			
24				68	1200	390	36	12	6.0			
25				79	1350	370	33	12	6.0			
26			18	89	1700	370	30	10	6.0			
27			19	88	1880	332	33	10	8.0			
28			16	100	2000	314	39	10	15			
29			16	146	1880	370	33	13	15			
30			16	205	1940	332	32	12	15			
31			14		1880		40	14				
Total				1322	23857	26632	2393	535	305.4			
Mean	25	22	23	44.1	770	888	77.2	17.3	10.2			
Max				205	2000	1700	263	33	15			
Min				14	205	314	30	10	6.0			
Acre-ft.	1540	1220	1350	2620	47300	52800	4750	1060	607			

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Buzzard Creek near Collbran for 1921.

Drainage Area, 136 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	....	....	....	....	37	5.0	15	....
2	....	....	....	....	....	....	....	....	44	3.9	15	....
3	....	....	....	....	....	....	....	....	33	4.4	11	....
4	....	....	....	....	....	....	....	....	27	4.4	14	....
5	....	....	....	....	....	....	....	....	22	4.2	13	....
6	....	....	....	....	....	....	....	....	18	3.9	12	....
7	....	....	....	....	....	....	....	....	16	4.2	12	....
8	....	....	....	....	....	....	....	....	15	3.9	11	....
9	....	....	....	....	....	....	....	....	13	4.2	11	....
10	....	....	....	....	....	....	....	....	12	4.2	13	....
11	....	....	....	....	....	....	....	....	11	4.2	13	....
12	....	....	....	....	....	....	....	....	8.7	4.2	14	....
13	....	....	....	....	....	....	....	....	8.3	5.0	7.2	....
14	....	....	....	....	....	....	....	....	7.6	5.0	11	....
15	....	....	....	....	....	....	....	....	6.9	5.0	6.1	....
16	....	....	....	....	....	....	....	....	6.4	5.0	4.4	....
17	....	....	....	....	....	....	....	....	5.8	5.0	7.2	....
18	....	....	....	....	....	....	....	13	6.1	11	11	....
19	....	....	....	....	....	....	....	11	6.9	11	15	....
20	....	....	....	....	....	....	....	11	13	11	22	....
21	....	....	....	....	....	....	....	13	12	11	11	....
22	....	....	....	....	....	....	....	16	10	11	11	....
23	....	....	....	....	....	....	....	19	8.7	10	7.2	....
24	....	....	....	....	....	....	....	21	8	12	7.2	....
25	....	....	....	....	....	....	....	24	8	18	7.2	....
26	....	....	....	....	....	....	....	27	7.6	18	4.4	....
27	....	....	....	....	....	....	....	30	7.2	18	4.4	....
28	....	....	....	....	....	....	....	30	7.2	20	4.4	....
29	....	....	....	....	....	....	....	66	7.2	16	4.4	....
30	....	....	....	....	....	....	....	40	7.2	16	4.4	....
31	....	....	....	....	....	....	....	40	....	16	....	....
Total	....	....	....	....	....	....	....	361	400.8	274.7	303.5	....
Mean	....	....	....	....	....	....	....	25.8	13.4	8.86	10.1	15
Max	....	....	....	....	....	....	....	....	44	20	22	....
Min	....	....	....	....	....	....	....	....	5.8	3.9	4.4	....
Acre-ft.	....	....	....	....	....	....	....	716	797	545	601	922

Discharge of Buzzard Creek at Collbran for 1922.

Drainage Area, 136 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	22	454	428	56	6.4	4.4	....	....	....
2	....	....	....	25	394	402	44	13.0	4.4	....	....	....
3	....	....	....	52	463	360	40	9.9	4.4	....	....	....
4	....	....	....	75	517	334	34	6.9	4.4	....	....	....
5	....	....	....	75	598	343	31	5.8	4.4	....	....	....
6	....	....	....	52	776	343	28	4.4	4.4	....	....	....
7	....	....	....	52	776	318	25	3.9	4.4	....	....	....
8	....	....	....	70	833	343	20	2.5	4.4	....	....	....
9	....	....	....	60	757	318	20	2.2	4.4	....	....	....
10	....	....	....	48	517	293	22	3.9	4.4	....	....	....
11	....	....	....	37	474	261	20	4.2	1.5	....	....	....
12	....	....	....	34	430	237	15	3.4	1.4	....	....	....
13	....	....	....	31	386	221	13	2.5	1.2	....	....	....
14	....	....	....	31	343	213	11	4.4	0.9	....	....	....
15	....	....	....	40	394	168	10	6.1	0.6	....	....	....
16	....	....	....	37	445	147	8.3	4.4	0.5	....	....	....
17	....	....	....	31	580	140	7.2	2.0	0.8	....	....	....
18	....	....	....	28	719	140	8.0	2.5	1.4	....	....	....
19	....	....	....	25	681	126	6.9	3.7	1.0	....	....	....
20	....	....	....	44	719	120	6.6	5.5	1.0	....	....	....
21	....	....	....	107	776	113	7.6	5.5	1.2	....	....	....
22	....	....	....	168	634	101	7.2	8.3	1.5	....	....	....
23	....	....	....	221	626	101	7.2	11.0	1.2	....	....	....
24	....	....	....	237	619	85	6.4	5.8	1.2	....	....	....
25	....	....	....	245	611	70	5.2	3.7	1.4	....	....	....
26	....	....	40	245	604	65	4.7	2.5	1.4	....	....	....
27	....	....	40	261	596	60	4.7	2.0	1.4	....	....	....
28	....	....	40	293	589	52	6.3	1.4	3.4	....	....	....
29	....	....	37	428	634	60	4.4	4.4	5.8	....	....	....
30	....	....	34	481	580	75	5.2	4.4	4.4	....	....	....
31	....	....	28	....	517	....	5.5	4.4	....	....	....	....
Total	....	....	....	3555	18042	6037	490.4	151.0	77.2	....	....	....
Mean	24	30	44	118	582	201	15.8	4.87	2.57	....	....	....
Max	....	....	....	481	833	428	56.	13.	5.8	....	....	....
Min	....	....	....	22	343	52	4.4	1.4	0.5	....	....	....
Acre-ft.	1480	1670	2710	7020	35800	12000	972	299	153	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Taylor River at Almont for 1921.

Drainage Area, 413 Square Miles. Altitude, 8,031 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	130	140	162	392	2000	1090	455	455	163	185	98
2	....	130	140	172	478	1840	1090	425	401	163	185	98
3	....	130	140	200	640	1760	1090	488	368	159	185	98
4	....	130	140	200	730	2000	1090	419	346	156	185	98
5	....	130	140	200	775	1920	1030	332	318	179	182	98
6	....	130	130	200	870	2000	810	318	295	205	179	80
7	....	130	130	200	775	1920	810	313	283	205	179	80
8	....	130	130	200	460	1840	810	308	275	205	153	80
9	....	130	130	212	460	1920	760	308	263	205	148	80
10	....	130	130	212	419	2160	810	308	252	205	137	80
11	....	135	130	212	442	2640	760	318	238	205	126	93
12	....	135	150	212	525	2640	715	318	238	205	124	93
13	....	135	150	212	685	2640	970	318	230	205	116	93
14	....	135	150	206	775	3040	1030	318	217	205	116	93
15	....	135	160	200	820	3200	1090	318	211	205	116	93
16	....	130	162	200	685	2720	915	318	238	205	116	93
17	....	130	162	188	820	2380	810	318	238	205	97	93
18	....	130	162	191	730	2060	810	300	238	201	97	93
19	....	130	162	200	600	1680	760	300	238	185	97	93
20	....	130	162	212	525	1400	715	300	238	182	97	93
21	....	140	162	200	640	1540	715	413	238	169	104	93
22	....	140	162	200	820	1400	715	514	230	169	104	93
23	....	140	172	200	775	1470	630	590	211	179	104	93
24	....	140	150	200	975	1400	670	555	205	185	104	93
25	....	140	150	200	1030	1340	630	555	196	185	104	93
26	....	140	150	200	730	1280	555	395	193	185	114	127
27	....	140	150	200	1030	1150	520	368	182	185	114	127
28	....	140	150	200	1470	1150	455	390	178	185	114	127
29	....	....	150	200	1540	1150	419	368	175	185	114	127
30	....	....	150	305	1840	1090	413	378	172	185	114	127
31	....	....	150	....	2000	....	425	368	....	185	....	127
Total	4030	3745	4596	6096	25456	56730	24112	11694	7560	5845	3910	3047
Mean..	130	134	148	203	821	1890	778	377	252	189	130	98.3
Max....	....	....	....	305	2000	3200	1090	590	455	205	185	....
Min....	....	....	....	162	392	1090	413	300	172	156	....	....
Acre-ft.	7990	7440	9100	12100	50500	112000	47800	23200	15000	11600	7740	6040

Discharge of Taylor River at Almont for 1922.

Drainage Area, 413 Square Miles. Altitude, 8,031 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	149	153	153	153	565	1630	915	450	270	....	....	....
2	149	153	153	153	605	1560	825	413	270	....	....	....
3	149	153	153	153	673	1700	780	375	248	....	....	....
4	149	140	153	179	825	1700	735	350	256	....	....	....
5	149	140	153	179	1030	1700	735	325	234	....	....	....
6	111	140	153	153	1230	1930	735	308	217	....	....	....
7	111	140	153	169	1290	2010	690	266	209	....	....	....
8	111	153	153	153	1150	2170	605	243	205	....	....	....
9	111	153	153	153	942	2170	565	248	201	....	....	....
10	111	153	153	131	825	1930	825	256	189	....	....	....
11	153	153	153	116	762	1930	648	261	185	....	....	....
12	153	153	153	142	589	1930	565	256	185	....	....	....
13	153	153	153	137	589	1930	486	252	185	....	....	....
14	153	153	153	148	605	1850	457	281	185	....	....	....
15	153	153	153	142	648	1700	430	320	185	....	....	....
16	153	153	153	140	573	1490	413	308	185	....	....	....
17	153	153	153	145	690	1360	394	394	185	....	....	....
18	153	153	153	131	906	1490	394	387	175	....	....	....
19	153	153	153	142	960	1420	394	368	163	....	....	....
20	153	159	153	159	980	1420	413	350	159	....	....	....
21	153	159	145	169	1120	1290	406	320	153	....	....	....
22	153	159	137	225	1120	1290	387	314	153	....	....	....
23	153	159	148	252	1290	1170	335	276	153	....	....	....
24	153	159	166	298	1560	1170	325	276	153	....	....	....
25	153	159	166	320	1780	1120	292	266	156	....	....	....
26	153	153	153	338	2010	1060	281	248	169	....	....	....
27	153	153	153	314	2170	960	298	261	153	....	....	....
28	153	153	153	350	2170	915	331	276	175	....	....	....
29	153	....	153	420	2170	960	387	276	179	....	....	....
30	153	....	153	503	2170	960	387	276	169	....	....	....
31	153	....	153	....	1930	....	450	270	....	....	....	....
Total	4471	4268	4740	6167	35927	45915	15883	9470	5714	....	....	....
Mean..	144	152	153	206	1160	1530	512	305	190	....	....	....
Max—	....	....	166	503	2170	2170	915	450	270	....	....	....
Min....	....	....	....	116	565	915	281	243	153	....	....	....
Acre-ft.	8850	8440	9410	12300	71300	91000	31500	18800	11300	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Gunnison River near Gunnison for 1921.

Drainage Area, 1,010 Square Miles. Altitude, 7,673 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	230	200	230	340	790	4050	2350	940	1050	370	310	218
2........	230	200	230	370	1100	3650	2440	840	940	370	322	218
3........	230	200	230	370	1410	4050	2260	840	790	370	310	218
4........	230	200	230	370	1550	4050	2350	740	650	358	300	218
5........	230	200	230	340	2180	4050	1620	740	650	370	310	218
6........	230	200	230	340	2350	4050	1410	740	650	358	310	218
7........	230	200	230	310	2090	4260	1410	740	570	370	300	218
8........	230	200	230	310	1480	4050	1410	650	570	370	310	218
9........	230	200	230	370	1410	4470	1410	650	570	370	310	218
10........	230	200	230	310	1550	5310	1410	695	570	370	300	218
11........	235	220	260	370	1550	5730	1410	650	500	358	310	235
12........	235	220	260	370	1620	6160	1410	650	500	322	310	235
13........	235	220	260	400	1700	5730	1620	650	500	310	322	235
14........	235	220	260	382	1930	6380	1850	740	500	310	310	235
15........	235	220	260	370	2180	6380	1780	840	430	322	300	235
16........	235	220	290	370	2350	5730	1480	695	430	310	310	235
17........	235	220	290	382	2180	5310	1480	650	444	322	236	235
18........	235	220	300	370	2100	4260	1410	650	444	310	236	235
19........	235	220	310	430	1780	3650	1480	570	535	370	236	235
20........	235	220	340	465	1780	3250	1410	610	465	322	236	235
21........	235	220	310	465	1850	3250	1410	695	430	310	260	260
22........	235	220	310	465	1780	3250	1550	890	430	310	260	260
23........	235	220	285	740	1850	3250	1410	1100	418	310	260	260
24........	235	220	285	740	2010	3250	1410	995	400	310	260	260
25........	235	220	310	570	2350	2870	1280	940	370	310	260	260
26........	235	220	260	535	1930	2870	1220	840	370	300	259	260
27........	235	220	310	430	2100	2780	1050	840	340	285	259	260
28........	235	220	260	430	2960	2690	940	840	322	310	259	260
29........	235	....	260	430	3550	2600	940	890	340	310	259	260
30........	235	....	310	500	3850	2600	940	940	370	300	259	260
31........	235	....	310	....	4050	....	890	1050	....	300	....	260
Total	7235	5960	8340	12644	63360	123980	46440	24300	15548	10287	8483	7390
Mean..	233	213	269	421	2040	4130	1500	784	518	332	283	238
Max....	....	....	340	740	4050	6380	2440	1100	1050	370	322	....
Min.....	....	....	....	310	790	2600	890	570	322	300	....	....
Acre-ft.	14300	11800	16500	25100	125000	246000	92200	48200	30800	20400	16800	14600

Discharge of Gunnison River Near Gunnison for 1922.

Drainage Area, 1,010 Square Miles. Altitude, 7,673 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	285	295	262	270	1470	3750	1820	650	360	....	....	....
2........	285	295	262	270	1610	3150	1660	740	360	....	....	....
3........	285	295	262	334	1680	2950	1520	695	360	....	....	....
4........	202	295	262	412	1840	3350	1370	570	425	....	....	....
5........	202	295	262	412	2420	3550	1300	570	425	....	....	....
6........	202	304	250	382	2950	3750	1300	532	392	....	....	....
7........	265	304	250	370	3370	3750	1240	495	360	....	....	....
8........	265	304	250	382	3140	4350	1050	495	354	....	....	....
9........	265	304	250	382	2420	4350	1050	460	360	....	....	....
10........	265	304	250	370	2250	3350	1240	532	344	....	....	....
11........	265	304	250	382	1760	3550	995	495	310	....	....	....
12........	265	304	250	352	1610	3350	995	460	300	....	....	....
13........	265	304	250	334	1610	3550	940	495	290	....	....	....
14........	265	304	225	295	1470	3550	788	532	280	....	....	....
15........	265	304	225	322	1610	3350	740	570	260	....	....	....
16........	279	310	225	328	1780	2950	695	532	260	....	....	....
17........	279	310	225	328	1780	2760	740	532	255	....	....	....
18........	279	310	225	316	2600	2760	695	570	255	....	....	....
19........	279	310	240	328	2600	2760	650	570	250	....	....	....
20........	279	310	240	376	2780	2760	595	532	236	....	....	....
21........	279	310	240	388	2780	2580	650	532	227	....	....	....
22........	279	310	240	521	2780	2580	695	532	213	....	....	....
23........	279	310	240	594	3160	2580	570	495	208	....	....	....
24........	279	310	240	770	3550	2580	532	460	208	....	....	....
25........	279	310	267	820	3950	2400	532	425	208	....	....	....
26........	279	297	267	920	4160	2400	495	392	217	....	....	....
27........	279	297	267	820	4360	2230	460	392	227	....	....	....
28........	279	297	267	870	4580	2060	460	360	227	....	....	....
29........	279	....	267	973	4780	1820	532	360	222	....	....	....
30........	279	....	267	1200	4780	1820	570	392	227	....	....	....
31........	279	....	267	....	3950	....	570	392	....	....	....	....
Total	8310	8506	7744	14821	85540	90690	27549	15759	8620	....	....	....
Mean..	268	304	250	494	2760	3020	889	508	287	....	....	....
Max....	....	....	....	1200	4780	4350	1820	740	425	....	....	....
Min.....	....	....	....	270	1470	1820	460	360	208	....	....	....
Acre-ft.	16500	16900	15400	29400	170000	180000	54700	31200	17100	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Gunnison River and Redlands Power Canal at Grand Junction for 1921.

Drainage Area, 7,920 Square Miles. Altitude, 4,573 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	1030	1020	1210	1350	3240	17400	7270	4160	3070	860	1350	1460
2......	1030	1010	1260	1310	5590	16000	6600	3420	3350	954	1460	1460
3......	1030	1000	1300	1350	7950	15400	6400	3130	2930	1010	1560	1370
4......	1030	990	1400	1730	9830	15400	6200	2850	2920	988	1250	1350
5......	1030	980	1740	2460	11700	16700	6200	2340	2800	992	1150	1300
6......	1050	970	1740	2530	13600	17100	5280	2100	2560	953	1150	1150
7......	1050	990	1740	2140	13300	18100	4600	1990	2200	951	1120	953
8......	1050	1010	1510	2060	10100	20100	4300	1690	1960	1000	1250	1100
9......	1050	1030	1300	1350	8220	20100	3700	1680	1850	1060	1300	1060
10......	1050	1080	1300	1340	6580	22200	3850	1580	1750	1000	1220	1060
11......	1050	1160	1210	1300	5800	23900	4150	1370	1570	1010	1250	1060
12......	1050	1300	1120	1340	5620	24900	3420	1290	1400	1040	1250	1060
13......	1050	1300	1120	1640	6730	25900	4770	1360	1320	1040	1200	1060
14......	1050	1400	1210	1920	9190	25200	4600	1360	1170	1040	1260	1060
15......	1050	1510	1400	2200	10700	29800	5450	1490	1100	1040	1210	1080
16......	1090	1510	1400	2130	12300	29400	5280	1850	1020	1040	1190	1060
17......	1090	1260	1510	1960	13900	24900	6010	1800	987	1040	1250	1060
18......	1090	1160	1620	1460	12300	20800	4930	1580	942	1040	1320	1100
19......	1090	990	1860	1630	11000	17800	4900	1290	890	1070	965	1100
20......	1090	870	1980	2390	8980	14400	4400	1200	890	1060	1150	1400
21......	1090	870	2110	2320	7680	12000	3830	1360	917	1000	1220	1430
22......	1090	870	1980	2200	8450	12000	4140	1680	917	919	1250	1250
23......	1090	830	1740	2200	9800	11400	4450	2960	895	919	1350	1350
24......	1090	790	1860	3960	11100	11400	4000	6740	1040	893	1350	1250
25......	1090	870	1620	4720	12000	10800	3850	4310	917	820	1420	1250
26......	1000	990	1510	3730	8980	10800	4610	3950	917	1120	1480	1250
27......	1000	1120	1300	2950	10800	10200	4450	4370	877	1420	1540	1270
28......	1000	1160	1160	2370	12400	9580	3840	3580	877	1510	1460	1350
29......	1000	....	1030	2130	15400	8500	3280	3330	890	1510	1350	1350
30......	1000	....	1030	2190	17400	7740	3140	3060	870	1420	1300	1400
31......	1000	....	1030	....	18800	....	2610	3070	....	1400	....	1350
Total	32550	30040	45300	64450	319440	519920	144510	77940	45796	33119	38575	37803
Mean	1050	1070	1460	2150	10300	17300	4660	2510	1530	1070	1290	1220
Max..	....	1510	2110	4720	18800	29800	7270	6740	3350	1510	1560	1460
Min...	....	790	1030	1300	3240	7740	2610	1200	870	820	965	953
Ac.-ft.	64600	59400	89800	128000	633000	1030000	287000	154000	91000	65800	76800	75000

Discharge of Gunnison River and Redlands Power Canal at Grand Junction for 1922.

Drainage Area, 7,920 Square Miles. Altitude, 4,573 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	1300	830	1100	1410	12700	15400	5470	2980	559	....	....	....
2........	1350	830	1100	1320	12700	13000	4950	1790	546	....	....	....
3........	1400	830	965	1560	13400	12000	4780	970	532	....	....	....
4........	1400	830	920	1620	14700	11400	3840	878	546	....	....	....
5........	1460	830	920	2170	15400	11400	3280	782	546	....	....	....
6........	1400	830	920	2610	19500	12000	3010	802	515	....	....	....
7........	1400	830	875	2030	22200	13000	3000	750	520	....	....	....
8........	1400	830	830	1730	21200	13400	3010	760	530	....	....	....
9........	1350	848	830	1580	18800	15000	2130	683	520	....	....	....
10........	1100	875	875	1900	14700	14400	2020	619	520	....	....	....
11........	1120	830	875	1590	10800	13400	2020	617	510	....	....	....
12........	1100	790	920	1340	8720	12000	1910	619	510	....	....	....
13........	1100	750	1010	1280	7460	12000	1810	619	480	....	....	....
14........	1060	642	1010	1250	7000	12400	1060	619	480	....	....	....
15........	938	750	1060	1170	7460	12000	1050	651	480	....	....	....
16........	830	830	1100	1550	7480	10800	1000	685	480	....	....	....
17........	830	830	1150	1590	8240	9040	979	802	474	....	....	....
18........	712	875	1300	1690	11100	8510	894	802	468	....	....	....
19........	735	920	1350	1230	14000	9310	770	802	476	....	....	....
20........	712	920	1200	1090	14700	9040	770	847	478	....	....	....
21........	690	920	1200	1120	16100	8510	770	1190	473	....	....	....
22........	675	1100	1100	2950	15400	8000	770	1840	458	....	....	....
23........	623	1200	1250	4410	16100	8000	770	1540	448	....	....	....
24........	610	1220	1400	4560	18100	7510	770	1270	448	....	....	....
25........	662	1250	1800	5420	18800	7750	770	990	448	....	....	....
26........	750	1300	1860	5780	18800	6210	690	909	468	....	....	....
27........	790	1200	1860	6560	19500	6210	738	661	468	....	....	....
28........	830	1150	1740	6990	19800	5670	782	625	478	....	....	....
29........	830	....	1940	7950	20100	4940	822	559	468	....	....	....
30........	814	....	1510	12000	19200	4760	1560	559	468	....	....	....
31........	830	....	1470	....	18100	....	1580	559	....	....	....	....
Total	30801	25840	37440	89450	462260	307060	57775	28779	14795	....	....	....
Mean..	994	923	1210	2980	14900	10200	1860	928	493	....	....	....
Max....	1460	1300	1940	12000	22200	15400	5470	2980	559	....	....	....
Min.....	610	642	830	1090	7000	4760	690	559	448	....	....	....
Acre-ft.	61100	51300	74400	177000	916000	607000	114000	57100	29300	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Tomichi Creek at Sargents for 1921.

Drainage Area, 165 Square Miles. Altitude, 8.467 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	200	740	204	89	56	....	....	....
2	....	....	....	....	200	720	201	87	55	....	....	....
3	....	....	....	....	207	700	186	86	54	....	....	....
4	....	....	....	....	216	720	183	84	53	....	....	....
5	....	....	....	....	260	736	178	86	52	....	....	....
6	....	....	....	....	323	722	175	86	50	....	....	....
7	....	....	....	....	288	708	168	78	48	38	41	....
8	....	....	....	....	216	736	162	76	46	....	....	....
9	....	....	....	....	210	792	155	77	46	....	....	....
10	....	....	....	82	195	771	151	78	45	....	....	21
11	....	....	....	86	204	750	151	74	44	....	....	....
12	....	....	....	93	264	764	149	73	43	....	....	....
13	....	....	....	78	292	757	151	73	42	....	....	....
14	....	....	....	88	338	750	130	70	41	38	....	....
15	....	....	....	57	338	750	130	70	40	....	....	....
16	....	....	....	53	350	757	130	70	44	....	....	....
17	....	....	....	99	400	764	130	70	40	....	....	....
18	....	....	....	106	400	750	130	70	42	....	....	....
19	31	....	67	114	400	500	130	70	42	....	....	....
20	....	....	....	112	400	400	130	70	43	....	....	....
21	....	....	....	114	400	291	130	70	42	37	....	....
22	....	....	....	112	400	268	130	70	40	....	....	....
23	....	....	....	144	400	261	130	70	38	....	....	....
24	....	....	....	175	505	264	130	70	37	....	....	....
25	....	....	50	175	560	272	130	70	36	45	....	....
26	....	....	....	130	450	216	130	65	35	....	....	....
27	....	....	....	140	560	240	108	62	34	....	....	....
28	....	....	....	150	650	234	104	61	33	....	....	....
29	....	....	....	160	680	228	98	60	32	....	....	....
30	....	....	....	180	720	192	94	59	30	....	....	....
31	....	....	....	....	740	....	91	58	....	....	....	....
Total	....	....	....	2448	11766	16753	4399	2252	1283	....	....	....
Mean	....	....	....	117	380	558	142	72.6	42.8	38	....	....
Max	....	....	....	180	740	792	204	89	56	....	....	....
Min	....	....	....	53	195	192	91	58	30	....	....	....
Acre-ft.	....	....	....	4870	23400	33200	8730	4460	2550	2340	....	....

Discharge of Tomichi Creek at Sargents for 1922.

Drainage Area, 165 Square Miles. Altitude, 8.467 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	150	230	63	56	22	....	....	....
2	....	....	....	....	150	195	57	45	22	....	....	....
3	....	....	....	....	150	200	54	39	24	....	....	....
4	....	....	....	....	150	206	50	35	27	....	....	....
5	....	....	....	....	150	217	48	29	25	....	....	....
6	....	....	....	....	194	220	47	29	20	....	....	....
7	....	....	....	....	194	209	46	28	19	....	....	....
8	....	....	....	....	194	214	42	26	19	....	....	....
9	....	....	....	....	194	209	39	26	19	....	....	....
10	....	....	....	....	194	198	43	27	16	....	....	....
11	....	....	....	....	178	190	43	29	16	....	....	....
12	....	....	....	....	158	180	38	27	15	....	....	....
13	....	....	....	....	151	171	35	26	15	....	....	....
14	....	....	....	....	151	153	34	27	15	....	....	....
15	....	....	....	....	153	135	32	26	15	....	....	....
16	....	....	....	....	141	129	32	27	14	....	....	....
17	....	....	....	....	155	125	31	28	14	....	....	....
18	....	....	....	....	186	114	33	25	14	....	....	....
19	....	....	....	....	196	109	34	28	14	....	....	....
20	....	....	....	....	214	100	32	30	13	....	....	....
21	....	....	....	....	231	90	33	28	13	....	....	....
22	....	....	....	....	225	88	35	32	13	....	....	....
23	....	....	....	....	240	90	32	29	12	....	....	....
24	....	....	....	....	243	90	31	28	12	....	....	....
25	....	....	....	....	243	90	29	27	12	....	....	....
26	....	....	....	....	246	83	26	23	12	....	....	....
27	....	....	....	....	250	71	28	23	11	....	....	....
28	....	....	....	....	305	65	34	23	10	....	....	....
29	....	....	....	....	270	66	32	23	10	....	....	....
30	26	....	....	....	290	65	34	23	10	....	....	....
31	....	....	....	....	270	....	47	22	....	....	....	....
Total	....	....	....	....	6216	4302	1193	894	473	....	....	....
Mean	....	....	....	....	201	143	38.5	28.8	15.8	....	....	....
Max	....	....	....	....	305	230	63	56	27	....	....	....
Min	....	....	....	....	....	65	26	22	10	....	....	....
Acre-ft.	....	....	....	....	12400	8510	2370	1770	940	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Lake Fork at Lake City for 1921.

Drainage Area, 126 Square Miles. Altitude, 8,675 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	19	24	54	612	660	213	234	50	25	21
2	....	....	19	23	69	665	660	213	213	49	25	23
3	....	....	19	21	133	665	605	198	198	47	30	23
4	....	....	19	27	235	665	605	183	183	47	25	23
5	....	....	19	28	305	612	502	169	150	47	25	23
6	....	....	19	29	330	515	415	155	136	47	25	25
7	....	....	19	31	330	470	415	147	123	49	25	25
8	....	....	19	31	214	560	415	142	119	47	25	25
9	....	....	19	31	181	795	455	131	107	45	25	25
10	....	....	19	29	166	1110	455	128	97	42	25	30
11	....	....	19	29	136	1470	415	126	90	42	25	31
12	....	....	19	29	133	1560	455	119	84	42	25	30
13	....	....	19	29	160	1470	455	116	79	40	23	29
14	....	....	19	32	175	1470	415	126	77	40	22	24
15	....	....	19	35	228	1560	415	126	73	40	21	22
16	....	....	19	36	305	1470	502	128	73	38	21	21
17	....	....	19	36	305	1390	455	123	73	37	17	24
18	....	....	19	35	280	1050	455	112	77	37	20	26
19	....	....	26	36	261	910	415	128	77	37	24	26
20	....	....	24	36	214	780	375	142	75	35	23	21
21	....	....	24	39	204	910	375	152	71	33	22	16
22	....	....	27	39	207	845	375	169	66	33	21	13
23	....	....	24	47	235	910	375	282	64	33	21	13
24	....	....	30	55	238	910	375	310	61	35	22	21
25	....	....	27	58	242	980	342	310	58	37	21	22
26	....	....	28	58	242	910	502	310	56	35	22	23
27	....	....	28	54	261	910	455	255	56	36	23	18
28	....	....	27	52	362	845	375	255	52	33	21	17
29	....	....	27	51	470	780	310	255	50	32	21	18
30	....	....	26	50	560	720	310	255	50	27	21	16
31	....	....	24	....	612	....	310	255	....	24	....	14
Total	589	476	682	1110	7847	28509	13648	5733	2922	1218	691	688
Mean	19	17	22.0	37.0	253	950	440	185	97.4	39.3	23.0	22.2
Max	....	....	....	58	612	1560	660	310	234	50	30	31
Min	....	....	....	21	54	470	310	112	50	24	17	13
Acre-ft.	1170	944	1350	2200	15600	56500	27100	11400	5800	2420	1370	1360

Discharge of Lake Fork at Lake City for 1922.

Drainage Area, 126 Square Miles. Altitude, 8,675 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14	12	13	19	162	613	535	154	60	....	....	....
2	14	12	13	19	180	474	518	154	60	....	....	....
3	14	12	13	22	208	442	474	137	60	....	....	....
4	14	12	13	35	220	526	450	125	62	....	....	....
5	14	12	13	44	249	646	434	123	58	....	....	....
6	14	14	13	66	368	755	434	114	48	....	....	....
7	14	14	13	75	482	807	396	110	41	....	....	....
8	14	14	13	64	474	1000	329	108	38	....	....	....
9	14	14	13	54	382	970	302	93	30	....	....	....
10	14	14	13	38	307	970	285	93	27	....	....	....
11	14	14	13	29	240	970	267	91	22	....	....	....
12	14	14	13	30	197	940	244	93	22	....	....	....
13	14	14	13	31	193	955	228	91	22	....	....	....
14	14	14	13	25	167	970	212	89	22	....	....	....
15	14	14	13	22	170	910	204	101	22	....	....	....
16	12	13	15	21	174	794	190	99	22	....	....	....
17	12	13	15	21	170	755	174	91	22	....	....	....
18	12	13	15	27	212	781	160	91	24	....	....	....
19	12	13	15	34	276	768	154	91	23	....	....	....
20	12	13	15	40	290	781	150	91	20	....	....	....
21	14	13	15	54	318	768	154	89	20	....	....	....
22	14	13	15	58	334	755	144	81	25	....	....	....
23	14	13	15	81	368	703	140	79	44	....	....	....
24	14	13	15	105	442	679	130	71	44	....	....	....
25	14	13	15	132	535	613	120	68	44	....	....	....
26	14	13	15	125	657	591	118	62	41	....	....	....
27	14	13	15	114	679	591	114	60	30	....	....	....
28	14	13	14	108	690	591	114	58	27	....	....	....
29	14	....	15	114	703	571	114	60	24	....	....	....
30	14	....	15	132	755	535	114	58	24	....	....	....
31	14	....	18	....	755	....	128	58	....	....	....	....
Total	424	369	437	1739	11357	22224	7530	2883	1028	....	....	....
Mean	13.7	13.2	14.1	58.0	366	741	243	93.0	34.3	....	....	....
Max	....	....	....	132	755	1000	535	154	62	....	....	....
Min	....	....	....	19	162	442	114	58	20	....	....	....
Acre-ft.	842	733	867	3450	22500	44100	14900	5720	2040	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River and Power House Flume at Ouray for 1921.
Drainage Area, 44 Square Miles. Altitude, 7,710 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	12	11	27	32	110	459	359	118	84	29	21	21
2........	15	11	31	41	166	441	385	97	72	28	24	23
3........	13	13	38	51	186	482	308	92	62	26	23	15
4........	13	14	39	61	226	385	255	84	59	27	24	22
5........	14	15	27	50	306	254	162	76	54	28	22	21
6........	14	14	25	40	236	278	170	70	51	29	18	22
7........	13	15	22	34	156	355	198	72	48	29	18	22
8........	10	15	21	34	136	429	182	70	48	28	18	20
9........	13	15	18	31	126	846	193	59	47	27	18	20
10........	14	16	21	28	106	1040	158	56	46	26	18	19
11........	13	13	22	29	111	1370	170	54	45	26	18	20
12........	13	17	21	33	126	1350	155	52	45	27	18	23
13........	10	16	23	36	156	1260	160	51	44	27	15	23
14........	8	16	21	36	188	1210	175	72	42	26	12	23
15........	10	16	22	38	221	1270	178	65	49	25	12	22
16........	12	16	22	40	266	945	233	52	46	26	10	22
17........	12	16	26	42	234	800	198	46	40	26	11	17
18........	13	16	32	44	214	570	216	42	41	25	12	21
19........	6	14	30	44	158	419	193	54	41	25	13	22
20........	8	15	27	40	143	407	195	59	40	25	14	22
21........	17	14	26	41	161	464	198	72	37	25	14	21
22........	17	14	26	43	194	527	190	116	35	24	14	21
23........	18	16	27	54	214	518	185	122	34	24	14	20
24........	18	16	24	53	231	480	155	105	32	28	13	16
25........	13	18	24	46	254	452	139	105	32	22	14	21
26........	15	21	24	41	208	460	180	93	33	24	13	21
27........	17	24	25	40	256	448	122	88	31	23	12	21
28........	18	27	26	37	397	424	112	79	32	23	14	20
29........	14	....	28	44	482	382	95	77	33	32	12	20
30........	14	....	27	71	526	338	103	79	32	34	16	20
31........	16	....	25	....	490	....	120	88	....	21	....	20
Total	413	444	797	1254	6984	19063	5842	2365	1335	815	475	641
Mean..	13.3	15.9	25.7	41.8	225	635	188	76.3	44.5	26.3	15.8	20.7
Max.....	18	27	39	71	526	1370	385	122	84	34	24	23
Min.....	16	11	18	28	106	254	95	42	31	21	10	15
Acre-ft.	818	883	1580	2490	13800	37800	11600	4690	2650	1620	940	1270

Discharge of Uncompahgre River and Power House Flume at Ouray for 1922.
Drainage Area, 44 Square Miles. Altitude, 7,710 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	17	15	16	19	165	230	360	76	40	....	....	....
2........	20	16	13	19	179	201	279	56	33	....	....	....
3........	20	16	15	21	201	224	273	60	33	....	....	....
4........	18	17	15	34	207	282	273	54	34	....	....	....
5........	13	18	17	29	289	391	246	51	33	....	....	....
6........	15	16	15	22	380	475	227	53	35	....	....	....
7........	19	18	15	20	346	514	209	51	32	....	....	....
8........	16	18	18	19	274	611	199	50	39	....	....	....
9........	14	19	17	20	189	615	175	48	33	....	....	....
10........	15	18	15	21	131	575	160	52	34	....	....	....
11........	14	17	16	20	99	514	151	49	36	....	....	....
12........	14	18	16	21	75	559	147	56	35	....	....	....
13........	14	16	16	18	109	607	140	49	31	....	....	....
14........	14	16	17	21	114	571	129	64	28	....	....	....
15........	17	15	19	24	115	461	124	47	28	....	....	....
16........	14	17	17	24	100	444	116	59	28	....	....	....
17........	16	18	24	20	129	469	99	69	28	....	....	....
18........	22	17	23	20	182	514	99	90	28	....	....	....
19........	20	15	16	23	222	521	99	65	28	....	....	....
20........	21	16	19	35	240	486	95	55	28	....	....	....
21........	19	16	21	62	237	465	82	49	27	....	....	....
22........	28	15	28	84	232	475	73	50	28	....	....	....
23........	27	15	28	97	300	475	76	49	28	....	....	....
24........	25	15	22	99	371	427	76	44	27	....	....	....
25........	20	15	22	97	413	357	64	40	26	....	....	....
26........	20	15	23	95	423	363	66	38	26	....	....	....
27........	20	15	22	101	465	371	71	38	28	....	....	....
28........	19	16	19	99	475	297	68	38	29	....	....	....
29........	18	....	19	114	486	276	80	36	26	....	....	....
30........	16	....	19	158	458	300	82	36	26	....	....	....
31........	15	....	18	....	477	....	83	40	....	....	....	....
Total	560	458	580	1456	8083	13070	4421	1612	915	....	....	....
Mean..	18.1	16.4	18.7	48.5	261	436	153	52.0	30.5	....	....	....
Max....	28	19	28	158	486	615	360	90	40	....	....	....
Min.....	13	15	13	18	75	201	64	36	26	....	....	....
Acre-ft.	1110	911	1150	2890	16000	25900	8790	3200	1810	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River Below Ouray for 1921.

Drainage Area, 76 Square Miles. Altitude, 7,710 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33	28	59	44	169	775	676	222	122	73	56	42
2	34	27	70	55	225	810	666	185	117	68	53	38
3	34	30	84	63	324	835	568	175	111	59	49	35
4	34	30	71	76	464	770	460	171	104	56	49	38
5	34	29	50	58	576	563	335	167	96	56	48	45
6	34	30	41	47	486	504	335	151	92	55	46	45
7	34	29	37	40	276	626	370	147	96	55	46	42
8	28	28	34	40	212	750	378	143	86	59	45	41
9	32	29	31	43	171	1120	419	135	78	56	40	45
10	32	29	34	61	153	1280	374	130	74	53	38	40
11	33	30	34	73	157	1360	366	128	71	53	40	42
12	32	34	34	75	195	1280	406	123	67	55	40	45
13	29	37	32	71	265	1250	360	126	65	53	46	47
14	29	38	32	62	346	1330	402	155	64	53	42	45
15	31	29	32	49	446	1550	414	139	67	48	41	45
16	31	28	37	54	486	1120	437	124	65	48	36	41
17	32	29	48	65	442	914	419	117	61	46	36	31
18	32	30	53	74	378	770	540	105	64	46	29	43
19	24	30	51	68	276	563	406	114	62	45	35	42
20	23	31	44	62	255	563	346	112	60	45	45	41
21	35	32	43	62	273	622	342	114	56	43	52	40
22	31	32	46	81	314	730	342	177	54	42	47	38
23	31	34	43	90	349	750	349	198	52	41	45	32
24	29	40	40	86	363	730	324	175	51	52	43	32
25	27	48	41	70	428	750	338	171	52	50	47	40
26	29	59	38	62	356	800	414	151	51	66	40	38
27	29	59	37	61	455	780	307	137	50	58	42	40
28	29	67	40	60	685	755	291	135	50	52	45	40
29	29	....	45	75	810	695	255	130	50	63	45	37
30	29	....	41	111	865	666	210	122	51	71	43	40
31	29	....	40	....	825	....	212	122	....	64	....	40
Total	952	976	1362	1938	12025	26011	12061	4501	2133	1684	1309	1250
Mean	30.7	34.9	43.9	64.6	388	867	389	145	71.1	54.3	43.6	40.3
Max	35	67	84	111	865	1550	676	222	122	73	56	47
Min	23	27	31	40	153	504	210	105	50	41	29	31
Acre-ft.	1890	1940	2700	3840	23900	51600	23900	8920	4230	3340	2590	2480

Discharge of Uncompahgre River Below Ouray for 1922.

Drainage Area, 76 Square Miles. Altitude, 7,710 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38	29	24	30	293	480	820	181	73	....	....	....
2	38	30	22	30	334	440	692	157	70	....	....	....
3	37	30	26	40	352	470	664	143	68	....	....	....
4	36	30	28	63	365	545	636	138	66	....	....	....
5	28	28	27	59	598	648	604	132	58	....	....	....
6	43	28	21	45	754	708	555	135	53	....	....	....
7	46	29	22	43	614	820	505	125	50	....	....	....
8	42	29	24	45	530	1030	500	115	49	....	....	....
9	38	28	23	46	425	1090	480	111	49	....	....	....
10	34	25	23	40	293	940	430	120	48	....	....	....
11	32	28	24	40	228	820	420	146	46	....	....	....
12	30	23	25	40	221	880	410	130	46	....	....	....
13	28	24	25	38	228	1030	395	130	41	....	....	....
14	28	25	29	41	228	1060	342	122	42	....	....	....
15	27	22	34	45	228	850	288	118	42	....	....	....
16	26	24	26	42	218	850	259	135	42	....	....	....
17	27	24	30	36	302	850	221	162	42	....	....	....
18	25	24	16	38	440	1000	218	171	41	....	....	....
19	25	28	27	43	465	1000	221	130	41	....	....	....
20	26	29	35	73	495	970	214	118	40	....	....	....
21	30	30	40	128	510	940	214	111	38	....	....	....
22	43	25	48	130	505	1000	190	91	38	....	....	....
23	42	26	50	138	609	1000	178	87	37	....	....	....
24	40	26	41	140	692	880	162	87	38	....	....	....
25	30	26	38	140	708	766	148	77	40	....	....	....
26	29	26	41	143	754	790	140	71	45	....	....	....
27	30	24	37	128	754	820	140	68	42	....	....	....
28	30	24	32	132	724	724	140	73	42	....	....	....
29	29	....	31	181	708	714	178	75	40	....	....	....
30	28	....	30	247	697	820	162	77	40	....	....	....
31	27	....	30	....	609	....	178	66	....	....	....	....
Total	1012	744	929	2384	14881	24935	10704	3602	1407	....	....	....
Mean	32.6	26.6	30.0	79.5	480	831	345	116	46.9	....	....	....
Max	46	30	50	247	754	1090	820	181	73	....	....	....
Min	25	22	16	30	218	440	140	66	37	....	....	....
Acre-ft.	2000	1480	1840	4730	29500	49400	21200	7130	2790	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River Near Colona for 1921.

Drainage Area, 443 Square Miles. Altitude, 6,399 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	70	96	193	224	653	1130	1330	632	487	120	....	....
2	70	91	208	214	850	1090	1250	552	466	138	....	....
3	82	102	184	234	1030	1150	1170	519	412	117	....	....
4	96	96	193	244	1110	1120	1050	498	380	114	....	....
5	96	74	184	247	1110	957	870	466	352	106	....	....
6	107	74	172	193	1080	895	772	421	330	104	....	....
7	96	82	150	178	794	1120	792	385	312	114	....	....
8	74	89	102	158	622	1160	798	357	299	109	....	....
9	70	74	96	172	521	1760	804	339	299	109	....	....
10	66	82	105	181	525	2020	824	308	270	106	....	....
11	72	87	110	211	452	3000	785	258	246	104	....	....
12	58	91	124	268	492	3500	876	258	230	106	....	....
13	56	100	129	258	530	4080	955	242	226	104	....	....
14	60	122	119	254	632	4080	1030	334	210	104	....	....
15	82	114	107	218	717	3900	1110	380	203	102	....	....
16	82	78	153	221	800	3600	1030	348	210	102	....	....
17	78	82	142	261	783	2940	996	299	176	102	....	....
18	107	78	127	240	783	2650	1110	274	170	99	....	....
19	110	78	134	290	658	2530	929	266	170	96	....	....
20	112	96	142	279	575	2530	856	308	157	94	....	....
21	100	100	137	268	632	2480	804	334	157	94	....	....
22	78	114	142	282	707	2530	798	412	154	94	....	....
23	100	91	122	352	756	2100	856	536	144	92	....	....
24	82	100	142	386	750	1650	779	476	135	99	....	....
25	87	137	145	320	816	1570	785	530	129	114	....	....
26	78	114	140	279	717	1490	883	471	126	106	....	....
27	100	164	98	254	712	1520	723	492	123	120	....	....
28	105	193	117	237	963	1520	668	466	123	106	....	....
29	114	....	150	258	1060	1490	632	476	117	126	....	....
30	105	....	180	460	1190	1430	575	466	114	138	....	....
31	93	....	200	....	1180	....	609	487	....	138	....	....
Total	2686	2799	4477	7641	24200	62992	27449	12590	6927	3377	....	....
Mean	86.6	100	144	255	781	2100	885	406	231	109	....	....
Max	114	193	208	460	1190	4080	1330	632	487	138	....	....
Min	56	74	96	158	452	895	575	242	114	92	....	....
Acre-ft.	5320	5350	8850	15200	48000	125000	54400	25000	13700	6700	....	....

Discharge of Uncompahgre River near Colona for 1922.

Drainage area, 443 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	102	680	739	1200	415	183	....	....	....
2	....	....	....	120	623	660	1120	419	176	....	....	....
3	....	....	....	132	676	670	1040	385	175	....	....	....
4	....	....	....	165	673	738	997	370	176	....	....	....
5	....	....	....	182	752	827	930	340	166	....	....	....
6	....	....	....	134	975	895	889	330	162	....	....	....
7	....	....	....	120	910	970	840	320	154	....	....	....
8	....	....	....	120	852	1350	790	300	146	....	....	....
9	....	....	....	128	755	1340	765	281	144	....	....	....
10	....	....	....	112	653	1320	732	285	137	....	....	....
11	....	....	....	112	558	1280	707	330	130	....	....	....
12	....	....	....	120	538	1380	635	295	120	....	....	....
13	....	....	....	108	560	1440	600	312	114	....	....	....
14	....	....	....	100	587	1500	555	315	114	....	....	....
15	....	....	....	127	560	1360	512	306	112	....	....	....
16	....	....	....	147	524	1320	502	312	112	....	....	....
17	....	....	....	115	570	1280	477	345	108	....	....	....
18	....	....	....	112	700	1360	423	565	105	....	....	....
19	....	....	....	121	733	1410	408	410	102	....	....	....
20	....	....	....	162	755	1400	404	340	100	....	....	....
21	....	....	....	285	792	1340	410	321	95	....	....	....
22	....	....	....	392	748	1380	400	297	92	....	....	....
23	....	....	....	382	835	1330	366	276	95	....	....	....
24	....	....	....	408	900	1300	316	274	92	....	....	....
25	....	....	....	395	925	1200	292	245	86	....	....	....
26	....	....	....	443	975	1140	270	242	85	....	....	....
27	....	....	....	402	1060	1160	275	219	91	....	....	....
28	....	....	....	445	1070	1100	317	197	86	....	....	....
29	....	....	....	543	1040	1040	370	197	81	....	....	....
30	....	....	....	703	1020	1070	377	200	81	....	....	....
31	....	....	....	....	900	....	385	186	....	....	....	....
Total	....	....	....	6937	23899	35299	18304	9629	3620	....	....	....
Mean	....	....	....	231	771	1180	590	311	121	....	....	....
Max	....	....	....	703	1070	1500	1200	565	183	....	....	....
Min	....	....	....	100	524	660	270	186	81	....	....	....
Acre-ft.	....	....	....	13700	47400	70200	36300	19100	7200	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River at Montrose for 1921.

Drainage Area, 565 Square Miles. Altitude, 5,820 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	119	34	140	75	750	838	1000	502	400	131	....	....
2	110	44	140	68	750	766	974	385	385	131	....	....
3	110	52	150	60	750	1200	974	336	286	141	....	....
4	104	52	160	54	774	983	421	326	286	143	....	....
5	104	57	140	98	806	948	426	299	197	143	....	....
6	104	64	134	57	889	914	490	236	197	162	....	....
7	104	76	110	137	303	1650	563	210	178	162	....	....
8	98	52	98	163	227	1320	634	184	229	162	....	....
9	82	64	76	514	160	2070	678	171	206	162	....	....
10	90	64	57	520	366	2360	723	322	236	167	....	....
11	82	64	71	526	325	2500	803	268	236	216	....	....
12	90	44	57	532	433	2810	1000	246	197	216	....	....
13	90	57	64	532	663	3060	904	232	171	203	....	....
14	82	71	71	416	822	2940	1000	341	162	203	....	....
15	82	71	57	416	940	2700	1130	483	150	195	....	....
16	82	57	64	484	1080	2430	1260	380	213	195	....	....
17	71	57	64	366	1090	1940	1390	322	197	192	....	....
18	71	57	90	401	1090	1490	1480	290	197	156	....	....
19	104	49	110	391	983	1350	1480	276	216	156	....	....
20	71	34	119	381	598	1320	598	294	213	156	....	....
21	71	26	110	371	670	1310	598	299	210	156	....	....
22	76	34	98	391	880	1490	464	303	210	160	....	....
23	76	36	57	401	1120	1380	385	453	210	160	....	....
24	64	44	57	376	914	1590	375	355	197	162	....	....
25	49	71	39	320	1200	1810	370	415	197	148	....	....
26	52	57	39	346	906	1560	464	410	184	148	....	....
27	57	76	39	193	991	1700	584	317	206	145	....	....
28	57	128	44	197	1300	1580	522	331	203	145	....	....
29	49	....	82	200	1000	1350	477	346	128	128	....	....
30	39	....	90	238	1000	1240	290	281	128	128	....	....
31	49	....	82	....	790	....	290	336	....	128	....	....
Total	2489	1592	2709	9124	24570	50599	22647	9949	6425	5000	....	....
Mean	80.3	56.9	87.4	304	793	1690	731	321	214	161	....	....
Max	119	128	160	532	1300	3060	1480	502	400	216	....	....
Min	39	26	39	54	160	766	290	171	128	128	....	....
Acre-ft.	4940	3160	5370	18100	48800	101000	44900	19700	12700	9900	....	....

Discharge of Uncompahgre River at Montrose for 1922.

Drainage Area, 565 Square Miles. Altitude, 5,820 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	18	868	1000	692	118	320	....	....	....
2	....	....	....	18	640	800	610	125	320	....	....	....
3	....	....	....	18	675	490	561	548	320	....	....	....
4	....	....	....	18	640	640	680	520	320	....	....	....
5	....	....	....	18	682	823	712	520	350	....	....	....
6	....	....	....	12	1080	992	585	470	350	....	....	....
7	....	....	....	12	500	1080	588	470	350	....	....	....
8	....	....	....	13	705	1630	590	460	264	....	....	....
9	....	....	....	18	582	1280	598	490	247	....	....	....
10	....	....	....	105	448	1040	602	480	191	....	....	....
11	....	....	....	105	357	1140	561	500	178	....	....	....
12	....	....	....	105	280	1140	542	500	159	....	....	....
13	....	....	....	105	400	1180	490	510	140	....	....	....
14	....	....	....	105	400	1440	520	520	126	....	....	....
15	....	....	....	105	357	992	500	500	126	....	....	....
16	....	....	....	320	357	1000	510	533	126	....	....	....
17	....	....	....	300	338	1040	520	585	126	....	....	....
18	....	....	....	320	675	1060	438	838	78	....	....	....
19	....	....	....	320	825	1080	438	730	72	....	....	....
20	....	....	....	425	850	1120	452	635	72	....	....	....
21	....	....	....	470	875	950	496	542	72	....	....	....
22	....	....	....	520	900	905	470	542	72	....	....	....
23	....	....	....	520	950	1040	470	520	72	....	....	....
24	....	....	....	520	1230	960	413	530	72	....	....	....
25	....	....	....	338	1080	820	438	480	55	....	....	....
26	....	....	....	338	995	665	460	438	55	....	....	....
27	....	....	....	318	1180	627	460	358	55	....	....	....
28	....	....	....	422	1230	796	460	358	111	....	....	....
29	....	....	....	682	1230	648	460	125	111	....	....	....
30	....	....	....	830	1200	890	118	54	145	....	....	....
31	....	....	....	....	1150	....	118	191	....	....	....	....
Total	....	....	....	7418	23679	29268	15552	14190	5055	....	....	....
Mean	....	....	....	247	764	976	502	458	168	....	....	....
Max	....	....	....	830	1230	1630	712	838	350	....	....	....
Min	....	....	....	12	280	490	118	54	55	....	....	....
Acre-ft.	....	....	....	14700	47000	58100	30900	28200	10000	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Uncompahgre River Near Delta for 1921.
Altitude, 4,970 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	136	144	176	25	270	300	90	532	440	203	....	....
2	220	136	182	24	480	245	30	390	442	200	....	....
3	194	155	207	35	565	225	69	329	350	200	....	....
4	182	136	227	58	670	298	104	303	230	191	....	....
5	173	144	234	71	680	329	156	340	192	182	....	....
6	182	152	182	71	735	520	152	345	95	201	....	....
7	194	130	173	91	490	1200	32	75	69	250	....	....
8	152	117	158	115	305	910	30	62	75	203	....	....
9	144	130	109	190	240	1420	28	60	100	246	....	....
10	144	104	92	183	210	1820	104	120	123	235	....	....
11	136	125	104	197	21	1970	202	95	60	240	....	....
12	152	117	92	42	22	2300	295	22	142	246	....	....
13	152	130	104	230	260	2300	201	60	105	235	....	....
14	164	152	114	126	303	2150	165	50	85	235	....	....
15	164	164	70	108	640	2150	360	332	92	250	....	....
16	158	136	50	141	685	1090	473	250	39	213	....	....
17	152	117	47	75	720	1090	482	200	112	175	....	....
18	147	136	54	120	670	1090	505	150	92	192	....	....
19	173	122	54	100	650	880	343	105	104	157	....	....
20	152	130	45	112	370	598	232	98	102	161	....	....
21	152	109	45	105	237	455	210	175	128	136	....	....
22	152	125	28	77	210	355	170	294	115	150	....	....
23	182	120	25	96	562	333	128	513	120	132	....	....
24	147	114	35	835	615	420	172	456	190	132	....	....
25	130	152	26	480	615	115	735	456	185	150	....	....
26	144	188	36	185	660	237	490	130	195	150	....	....
27	164	179	22	102	485	316	350	267	185	128	....	....
28	164	214	31	150	235	214	328	350	202	132	....	....
29	164	....	24	95	793	238	344	315	220	132	....	....
30	136	....	31	105	755	69	193	350	185	185	....	....
31	152	....	26	....	565	....	598	340	....	203	....	....
Total	4958	3878	2803	4344	14718	25637	7771	7564	4774	5845	....	....
Mean	160	138	90.4	145	475	855	251	244	159	189	....	....
Max	220	214	234	835	793	2300	598	532	442	250	....	....
Min	130	104	22	24	21	69	28	22	39	128	....	....
Acre-ft.	9840	7660	5560	8630	29200	50900	15400	15000	9460	11600	....	....

Discharge of Uncompahgre River Near Delta for 1922.
Drainage Area, 1,130 Square Miles. Altitude, 4,970 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	58	930	222	288	111	161	....	....	....
2	....	....	....	36	585	123	334	202	163	....	....	....
3	....	....	....	35	1050	117	226	152	180	....	....	....
4	....	....	....	118	500	121	39	168	165	....	....	....
5	....	....	....	120	552	121	46	158	200	....	....	....
6	....	....	....	85	1180	150	74	175	172	....	....	....
7	....	....	....	40	1100	472	77	168	175	....	....	....
8	....	....	....	41	955	930	79	147	178	....	....	....
9	....	....	....	212	775	785	176	150	155	....	....	....
10	....	....	....	160	475	615	170	152	155	....	....	....
11	....	....	....	130	296	343	153	181	160	....	....	....
12	....	....	....	126	162	355	30	168	198	....	....	....
13	....	....	....	103	125	355	61	175	188	....	....	....
14	....	....	....	103	182	555	23	198	132	....	....	....
15	....	....	....	103	243	420	30	188	178	....	....	....
16	....	....	....	49	215	335	118	198	201	....	....	....
17	....	....	....	47	212	190	139	170	180	....	....	....
18	....	....	....	42	320	493	132	419	225	....	....	....
19	....	....	....	48	380	536	161	443	210	....	....	....
20	....	....	....	72	540	560	153	472	155	....	....	....
21	....	....	....	116	775	562	130	355	171	....	....	....
22	....	....	....	280	647	402	129	342	178	....	....	....
23	....	....	....	280	320	630	116	311	193	....	....	....
24	....	....	....	160	393	562	277	342	188	....	....	....
25	....	....	....	91	475	472	153	280	188	....	....	....
26	....	....	....	280	395	332	176	230	155	....	....	....
27	....	....	....	251	593	422	226	176	207	....	....	....
28	....	....	....	208	770	332	118	207	188	....	....	....
29	....	....	....	220	747	392	122	192	165	....	....	....
30	....	....	....	220	572	412	123	187	165	....	....	....
31	....	....	....	....	325	....	101	152	....	....	....	....
Total	....	....	....	3834	16789	12316	4180	6969	5329	....	....	....
Mean	....	....	....	128	542	411	135	225	178	....	....	....
Max	....	....	....	280	1180	930	334	472	225	....	....	....
Min	....	....	....	35	125	117	23	111	132	....	....	....
Acre-ft.	....	....	....	7620	33300	24500	8300	13800	10600	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of North Fork Gunnison River Near Paonia for 1922
Drainage Area, 702 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	60	99	47	118	3200	2740	682	183	4.1	....	....	....
2	60	99	54	314	3350	2810	594	169	3.3	....	....	....
3	60	108	54	213	3450	2690	519	130	4.1	....	....	....
4	60	108	66	352	3620	2500	491	93	6.9	....	....	....
5	60	97	51	482	4260	2560	425	73	6.8	....	....	....
6	66	108	44	337	4960	2780	380	55	10.0	....	....	....
7	58	106	39	337	5130	2710	341	36	10.0	....	....	....
8	49	106	45	337	4630	2940	300	40	8.3	....	....	....
9	104	118	52	318	4150	2730	282	35	4.6	....	....	....
10	83	104	60	318	3050	2600	300	25	6.4	....	....	....
11	73	82	60	286	2380	2470	262	29	6.4	....	....	....
12	72	73	60	286	2130	2420	213	15	4.3	....	....	....
13	91	72	68	251	2080	2360	180	14	17.0	....	....	....
14	91	72	77	268	2160	2370	195	12	14.0	....	....	....
15	79	55	79	322	2100	1940	192	12	17.0	....	....	....
16	88	55	88	322	2360	1490	207	20	18.0	....	....	....
17	88	62	122	255	2840	1430	189	37	15.0	....	....	....
18	77	62	175	192	3750	1840	161	48	12.0	....	....	....
19	86	62	88	207	3850	1500	108	42	15.0	....	....	....
20	86	70	137	268	3850	1510	145	48	10.0	....	....	....
21	84	70	113	553	4020	1670	282	54	8.3	....	....	....
22	84	72	192	1110	3800	1570	95	70	8.3	....	....	....
23	75	55	272	1340	4040	1350	84	62	6.6	....	....	....
24	75	48	345	1720	4050	1260	65	45	5.6	....	....	....
25	82	55	275	1770	4290	1260	37	21	5.6	....	....	....
26	115	63	242	1880	4400	1040	31	15	5.6	....	....	....
27	127	55	311	1870	4310	918	31	6.4	6.6	....	....	....
28	90	43	258	2040	4250	814	35	8.0	6.6	....	....	....
29	102	....	195	2740	4330	782	88	8.0	8.3	....	....	....
30	90	....	153	2970	3940	841	97	7.6	8.3	....	....	....
31	88	....	118	....	3380	....	132	5.2	....	....	....	....
Total	2503	2179	3940	23776	112110	57895	7143	1418.2	262.0	....	....	....
Mean	80.7	77.8	127	793	3620	1930	230	45.7	8.73	....	....	....
Max	127	118	345	2970	5130	2940	682	183	18.0	....	....	....
Min	49	43	39	118	2080	782	31	5.2	3.3	....	....	....
Acre-ft.	4960	4320	7810	47200	223000	115000	14100	2810	519	....	....	....

Discarge of Dallas Creek at Ridgway for 1922.
Drainage Area, 90 Square Miles. Altitude, 6,980 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	21	18	229	9.4	202	141	63	....	....	....
2	....	....	26	22	202	7.0	197	113	59	....	....	....
3	....	....	36	20	224	6.1	171	109	59	....	....	....
4	....	....	21	22	202	5.5	164	104	59	....	....	....
5	....	....	17	29	156	5.3	156	89	52	....	....	....
6	....	....	25	22	89	7.9	141	87	48	....	....	....
7	....	....	27	20	25	10.	137	75	46	....	....	....
8	....	....	19	19	19	67	139	77	44	....	....	....
9	....	....	24	22	17	71	113	63	44	....	....	....
10	....	....	32	17	87	71	87	71	35	....	....	....
11	....	....	18	18	54	87	96	87	27	....	....	....
12	....	....	17	15	83	122	87	89	27	....	....	....
13	....	....	28	14	139	122	87	141	24	....	....	....
14	....	....	28	15	106	132	75	87	22	....	....	....
15	....	....	22	18	96	122	71	87	22	....	....	....
16	....	....	19	20	83	113	63	83	18	....	....	....
17	....	....	29	17	79	104	59	75	18	....	....	....
18	....	....	29	25	83	122	50	207	18	....	....	....
19	....	....	27	18	83	151	53	166	17	....	....	....
20	....	....	28	25	73	156	61	106	17	....	....	....
21	....	....	32	25	71	161	73	102	14	....	....	....
22	....	....	55	44	65	156	63	100	10.	....	....	....
23	....	....	52	67	55	181	55	91	9.5	....	....	....
24	....	....	36	79	48	161	51	91	10	....	....	....
25	....	....	28	79	35	156	55	81	10	....	....	....
26	....	....	25	100	35	151	59	79	10	....	....	....
27	....	....	22	94	38	151	63	67	11	....	....	....
28	....	....	17	109	38	149	139	65	12	....	....	....
29	....	....	17	235	18	146	207	63	10	....	....	....
30	....	....	18	322	17	186	122	63	11	....	....	....
31	....	....	17	....	16	....	118	63	....	....	....	....
Total	....	....	812	1550	2565	3089.2	3214	2922	826.5	....	....	....
Mean	....	....	26.2	51.7	82.7	103	104	94.3	27.6	....	....	....
Max	....	....	55	322	229	186	207	207	63	....	....	....
Min	....	....	17	14	16	5.3	50	63	9.5	....	....	....
Acre-ft.	....	....	1610	3080	5090	6130	6400	5800	1640	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Leroux Creek Near Lazear for 1921

Drainage Area, 52 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	13	173	696	41	33	41	4.7	4.5	....
2	....	....	....	23	253	620	33	26	41	8.6	4.4	....
3	....	....	....	41	302	570	30	23	33	5	3	....
4	....	....	16	55	403	570	46	20	30	3.5	3	....
5	....	....	15	50	496	496	41	20	25	3.3	3	....
6	....	....	9.2	33	545	595	30	20	26	3.5	3	....
7	....	....	13	33	306	830	30	20	19	3.5	3	....
8	....	....	11	37	162	670	26	20	13	3.3	3	....
9	....	....	20	37	118	749	26	20	15	2.8	3	....
10	....	....	20	33	103	620	33	20	16	2.6	3	....
11	....	....	18	37	103	520	30	18	18	3.5	3	....
12	....	....	11	47	143	472	30	15	14	4.4	3	....
13	....	....	11	37	253	472	41	13	13	3.3	3	....
14	....	....	12	42	425	425	37	11	14	3.3	1.2	....
15	....	....	13	37	570	425	33	11	13	3.3	1.2	....
16	....	....	13	33	830	285	30	11	13	3.2	3	....
17	....	....	11	33	722	238	33	9.2	11	3	2	....
18	....	....	13	33	496	162	30	9.2	12	2.9	2	....
19	....	....	11	46	268	118	30	13	21	2.9	2	....
20	....	....	9.2	37	173	96	26	15	13	2.9	2	....
21	....	....	7.5	33	224	71	30	33	13	2.9	2	....
22	....	....	7.5	37	285	77	30	37	13	2.9	2	....
23	....	....	13	55	403	77	60	46	12	2.8	2	....
24	....	....	13	41	620	71	50	77	11	3	2	....
25	....	....	18	33	595	60	30	37	11	4.4	2	....
26	....	....	13	30	472	55	26	26	11	4.4	2	....
27	....	....	11	41	670	46	20	23	10	3.7	2	....
28	....	....	11	33	971	41	18	26	9.6	3.2	2	....
29	....	....	11	30	914	41	23	46	8.9	2.8	2	....
30	....	....	11	71	804	41	26	30	7.9	3	2	....
31	....	....	11	....	776	....	26	30	....	4.4	....	....
Total	....	....	353.4	1141	13574	10209	995	758.4	508.4	111	75.3	....
Mean	....	....	12.6	38.0	438	340	32.1	24.5	17.0	3.6	2.5	....
Max	....	....	....	71	971	830	60	77	41	8.6	4.5	....
Min	....	....	....	13	103	41	18	9.2	7.9	2.6	1.2	....
Acre-ft.	....	....	701	2260	26900	20200	1970	1510	1010	221	149	....

Discharge of Leroux Creek at Lazear for 1922

Drainage Area, 52 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	318	537	74	21	11	....	....	....
2	....	....	....	....	376	537	63	16	12	....	....	....
3	....	....	....	....	441	512	44	12	13	....	....	....
4	....	....	....	....	464	562	39	9.2	25	....	....	....
5	....	....	....	....	664	562	42	8.8	22.	....	....	....
6	....	....	....	....	799	537	35	8.0	14.	....	....	....
7	....	....	....	....	638	488	41	10.0	8.0	....	....	....
8	....	....	....	....	488	488	40	10.0	5.6	....	....	....
9	....	....	....	....	283	441	43	7.7	12.	....	....	....
10	....	....	....	....	196	346	45	8.0	4.0	....	....	....
11	....	....	....	....	119	251	47	11.0	1.2	....	....	....
12	....	....	....	....	89	236	40	8.0	1.2	....	....	....
13	....	....	....	....	84	251	38	16.	1.6	....	....	....
14	....	....	....	....	98	236	33	21.	0.8	....	....	....
15	....	....	....	....	105	163	32	21.	0.8	....	....	....
16	....	....	....	12	127	135	36	21	0.8	....	....	....
17	....	....	....	12	222	127	40	22.	0.6	....	....	....
18	....	....	....	11	376	135	40	14	1.1	....	....	....
19	....	....	....	10	397	127	38	16	1.0	....	....	....
20	....	....	....	11	441	119	38	17	0.7	....	....	....
21	....	....	....	30	397	112	40	16	0.7	....	....	....
22	....	....	....	67	537	105	37	14	0.6	....	....	....
23	....	....	....	105	744	98	32	14	0.6	....	....	....
24	....	....	....	144	856	92	27	14	0.5	....	....	....
25	....	....	....	163	717	82	25	14	0.5	....	....	....
26	....	....	....	144	717	75	23	7.7	0.5	....	....	....
27	....	....	....	119	856	73	30	7.1	0.5	....	....	....
28	....	....	....	144	744	74	29	4.8	0.4	....	....	....
29	....	....	....	173	799	77	38	10.	0.3	....	....	....
30	....	....	....	318	690	89	33	12.	0.7	....	....	....
31	....	....	....	....	612	....	27	12.	....	....	....	....
Total	....	....	....	1463	14394	7667	1189	403.3	141.7	....	....	....
Mean	....	....	....	97.5	464	256	38.4	13.0	4.72	....	....	....
Max	....	....	....	....	856	562	74	22.	25.	....	....	....
Min	....	....	....	....	84	73	23	4.8	0.3	....	....	....
Acre-ft.	....	....	....	2900	28500	15200	2360	799	281	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Surface Creek at Cedaredge for 1921.

Drainage Area, 43 Square Miles. Altitude, 7,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	1.4	80	298	68	40	40	11	0.6	....
2	....	....	....	1.2	152	288	65	51	40	12	0.6	....
3	....	....	....	0.7	203	264	68	7.8	34	10	1	....
4	....	....	....	0.3	264	259	99	11	34	8.4	1.4	....
5	....	....	....	7	323	269	82	7.8	30	10	1.8	....
6	....	....	....	4	313	323	96	7.8	30	11	0.6	....
7	....	....	....	4	194	374	79	7.8	33	11	0.5	....
8	....	....	....	9	104	348	72	7.8	28	8.4	1	....
9	....	....	....	9	75	390	74	7.8	33	7.2	1.4	....
10	....	....	....	6	64	364	89	2.6	40	5.2	2.2	....
11	....	....	....	7	63	338	84	33	51	5.2	2.2	....
12	....	....	....	17	113	298	110	32	51	4.6	1	....
13	....	....	3.5	7	169	278	84	41	35	5.2	0.6	....
14	....	....	3.5	11	240	254	86	41	28	7.2	0.6	....
15	....	....	3.5	9	264	230	58	43	24	18	0.6	....
16	....	....	3.2	7	318	206	54	38	23	3	0.6	....
17	....	....	2.9	7	259	182	96	35	26	2.2	0.6	....
18	....	....	2	7	182	158	79	29	23	2.6	1.4	....
19	....	....	2	17	104	134	56	40	28	2.6	2.2	....
20	....	....	2	12	68	110	40	56	20	3	3	....
21	....	....	1.4	8	61	110	47	72	16	3	1.2	....
22	....	....	0.6	12	91	110	54	54	18	3.4	1	....
23	....	....	0.4	25	131	110	63	51	17	2.2	0.7	....
24	....	....	1.2	20	208	110	34	91	17	0.5	0.4	....
25	....	....	1.2	13	217	110	34	43	15	0.6	0.3	....
26	....	....	1.5	9.5	160	99	26	24	12	0.6	0.2	....
27	....	....	1.4	11	217	72	28	22	11	1	0.2	....
28	....	....	1.2	15	269	79	18	14	8.4	1	0.2	....
29	....	....	1.5	11	278	74	11	14	8.4	1	0.2	....
30	....	....	1.4	59	308	94	18	13	10	0.6	0.2	....
31	....	....	1.4	....	318	....	18	18	....	0.6	....	....
Total	....	....	35.8	327.1	5810	6333	1890	995.4	783.8	162.3	28.5	....
Mean	....	....	1.9	10.9	187	211	61.0	30.8	26.1	5.2	0.95	....
Max	....	....	....	59	323	390	110	91	51	18	3	....
Min	....	....	....	0.3	61	71	11	2.6	8.4	0.5	0.2	....
Acre-ft.	....	....	71.0	649	11500	12600	3750	1890	1550	320	56	....

Discharge of Surface Creek at Cedaredge for 1922.

Drainage Area, 43 Square Miles. Altitude, 7,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	220	245	77	10	26	....	....	....
2	....	....	....	....	300	245	74	27	32	....	....	....
3	....	....	....	....	330	240	68	22	20	....	....	....
4	....	....	....	....	400	240	60	29	25	....	....	....
5	....	....	....	....	450	270	88	23	25	....	....	....
6	....	....	....	....	540	290	60	23	25	....	....	....
7	....	....	....	....	520	270	68	20	22	....	....	....
8	....	....	....	....	400	270	65	17	21	....	....	....
9	....	....	....	....	240	230	60	17	18	....	....	....
10	....	....	....	....	250	180	60	26	17	....	....	....
11	....	....	....	....	100	160	62	20	17	....	....	....
12	....	....	....	....	72	160	43	27	15	....	....	....
13	....	....	....	....	72	140	35	34	13	....	....	....
14	....	....	....	....	72	114	77	35	9.4	....	....	....
15	....	....	....	....	72	100	58	34	9.4	....	....	....
16	....	....	....	....	84	77	41	51	8.3	....	....	....
17	....	....	....	....	130	77	37	46	7.2	....	....	....
18	....	....	....	....	210	68	50	37	5.6	....	....	....
19	....	....	....	....	220	77	57	38	5.0	....	....	....
20	....	....	....	....	230	77	45	33	6.7	....	....	....
21	....	....	....	....	270	77	45	32	11	....	....	....
22	....	....	....	....	290	77	37	27	15	....	....	....
23	....	....	....	....	320	77	27	22	20	....	....	....
24	....	....	....	....	310	77	16	22	18	....	....	....
25	....	....	....	....	310	77	18	22	14	....	....	....
26	....	....	....	....	340	68	35	40	14	....	....	....
27	....	....	....	62	320	60	39	42	14	....	....	....
28	....	....	....	82	290	66	27	26	15	....	....	....
29	....	....	....	106	290	66	23	26	14	....	....	....
30	....	....	....	166	290	88	8.8	39	12	....	....	....
31	....	....	....	....	280	....	6.7	37	....	....	....	....
Total	....	....	....	416	8222	4263	1467.5	904	474.6	....	....	....
Mean	....	....	....	....	265	142	47.3	29.2	15.8	....	....	....
Max	....	....	....	....	540	290	88	51	32	....	....	....
Min	....	....	....	....	72	60	6.7	10	5	....	....	....
Acre-ft.	....	....	....	824	16300	8450	2910	1800	940	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Escalante Creek near Delta for 1922.

Drainage Area, 194 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	26	472	265	28	15	3.5	....	....	....
2	....	....	....	26	491	226	21	11	5.5	....	....	....
3	....	....	....	26	491	182	15	11	4.5	....	....	....
4	....	....	....	26	548	214	11	8	5.5	....	....	....
5	....	....	....	26	842	182	11	5.5	5.8	....	....	....
6	....	....	....	26	1250	172	11	1.4	5.5	....	....	....
7	....	....	....	26	1110	154	11	21.0	5.5	....	....	....
8	....	....	....	29	1190	137	11	15.0	5.5	....	....	....
9	....	....	....	36	705	122	8	11	5.5	....	....	....
10	....	....	....	29	397	114	5.5	11	5.5	....	....	....
11	....	....	....	29	344	100	3.5	5.5	5.5	....	....	....
12	....	....	....	29	310	75	3.5	5.5	5.5	....	....	....
13	....	....	....	26	279	75	5.5	3.5	4.5	....	....	....
14	....	....	....	23	279	75	2.7	1.9	3.5	....	....	....
15	....	....	....	23	310	64	2.7	1.9	3.5	....	....	....
16	....	....	....	23	362	64	3.5	1.9	1.9	....	....	....
17	....	....	....	23	570	53	1.9	2.7	2.7	....	....	....
18	....	....	....	23	753	53	.9	15.0	2.7	....	....	....
19	....	....	....	23	803	43	.9	8.0	1.9	....	....	....
20	....	....	....	29	753	39	.9	8.0	1.9	....	....	....
21	....	....	....	43	705	35	6.8	11.0	1.9	....	....	....
22	....	....	....	60	753	35	3.5	15.0	1.9	....	....	....
23	....	....	....	124	753	32	3.5	11.0	1.9	....	....	....
24	....	....	....	132	636	28	2.7	9.5	2.7	....	....	....
25	....	....	....	141	452	24	3.5	8.0	1.9	....	....	....
26	....	....	....	181	592	21	1.9	5.5	3.5	....	....	....
27	....	....	....	192	570	15	1.9	1.9	3.5	....	....	....
28	....	....	....	285	471	15	1.9	3.5	3.5	....	....	....
29	....	....	....	256	434	24	1.4	3.5	3.5	....	....	....
30	....	....	....	454	310	28	1.4	3.5	3.5	....	....	....
31	....	....	....	....	294	....	21.0	3.5	....	....	....	....
Total	....	....	....	2395	18229	2666	208.0	239.7	114.7	....	....	....
Mean	....	....	....	79.8	588	88.9	6.71	7.73	3.82	....	....	....
Max	....	....	....	454	1250	265	28	21	6.8	....	....	....
Min	....	....	....	23	279	15	0.9	1.4	1.9	....	....	....
Acre-ft.	....	....	....	4750	36200	5290	413	475	227	....	....	....

Discharge of Kannah Creek near White Water for 1921.

Drainage Area, 38 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4	5	8	7	76	880	55	39	36	....	....	....
2	5	5	9	7	87	795	53	32	35	....	....	....
3	5	6	9	9	92	850	47	28	34	....	....	....
4	5	6	10	9	98	850	38	28	33	....	....	....
5	6	6	9	9	90	795	45	29	32	....	....	....
6	6	6	9	9	88	1210	45	30	32	....	....	....
7	6	7	9	10	108	1210	42	35	32	....	....	....
8	6	7	9	11	125	1330	41	35	32	....	....	....
9	6	7	7	12	116	1390	41	35	28	....	....	....
10	6	6	6	13	118	1090	41	38	26	....	....	....
11	6	7	8	13	127	850	40	39	23	....	....	....
12	6	7	9	13	122	520	34	40	22	....	....	....
13	6	7	9	13	102	445	34	39	20	....	....	....
14	6	7	9	14	104	1030	35	43	20	....	....	....
15	6	7	9	13	106	740	33	43	19	....	....	....
16	7	7	10	11	98	630	32	42	19	....	....	....
17	7	7	10	13	110	470	39	41	19	....	....	....
18	7	7	11	14	106	272	32	40	19	....	....	....
19	7	8	9	14	110	150	32	39	18	....	....	....
20	7	8	9	14	114	130	29	42	17	....	....	....
21	7	9	9	17	114	121	28	44	17	....	....	....
22	7	8	9	19	108	117	32	49	15	....	....	....
23	6	7	8	21	140	111	30	48	15	....	....	....
24	5	7	8	20	140	106	28	243	15	....	....	....
25	5	7	8	22	145	104	28	111	12	....	....	....
26	6	7	7	30	167	95	27	64	13	....	....	....
27	7	7	7	43	206	82	27	48	14	....	....	....
28	7	7	7	55	340	74	28	42	14	....	....	....
29	7	....	7	71	672	65	28	41	13	....	....	....
30	7	....	8	88	880	58	63	39	11	....	....	....
31	6	....	7	....	880	....	45	36	....	....	....	....
Total	190	192	263	614	5879	16570	1152	1502	655	....	....	....
Mean	6.1	6.9	8.5	20.5	190	552	37.2	48.5	21.8	....	....	....
Max	7	9	11	88	880	1390	63	243	36	....	....	....
Min	4	5	6	7	76	58	27	28	11	....	....	....
Acre-ft.	375	383	523	1220	11700	32800	2290	2980	1300	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Dolores River at Dolores for 1922.

Drainage Area, 524 Square Miles. Altitude, 6,954 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	4940	2450	716	400	104	......	......	......
2	......	......	......	......	5090	2040	700	325	104	......	......	......
3	......	......	......	......	5450	1800	700	335	104	......	......	......
4	......	......	......	......	5690	1800	700	292	104	......	......	......
5	......	......	......	......	6950	2300	676	240	116	......	......	......
6	......	......	......	......	6080	2250	611	180	101	......	......	......
7	......	......	......	......	4710	2580	555	180	91	......	......	......
8	......	......	......	......	3580	3020	460	172	83	......	......	......
9	......	......	......	......	2740	3300	400	167	80	......	......	......
10	......	......	......	......	2400	3220	430	200	80	......	......	......
11	......	......	......	180	1880	3080	460	167	80	......	......	......
12	......	......	......	212	1760	3080	442	154	80	......	......	......
13	......	......	......	204	2090	2690	375	154	73	......	......	......
14	......	......	......	192	2300	3380	315	147	73	......	......	......
15	......	......	......	260	2620	3300	300	142	73	......	......	......
16	......	......	......	252	2170	2450	292	149	73	......	......	......
17	......	......	......	240	2340	2580	280	167	73	......	......	......
18	......	......	......	204	3240	2300	280	180	73	......	......	......
19	......	......	......	365	3440	2210	268	180	73	......	......	......
20	......	......	......	684	3300	2340	260	188	66	......	......	......
21	......	......	......	1240	3440	2120	220	162	66	......	......	......
22	......	......	......	1520	3070	1830	220	159	66	......	......	......
23	......	......	......	1770	3300	1660	220	147	66	......	......	......
24	......	......	......	2010	4140	1500	208	142	66	......	......	......
25	......	......	......	2170	3720	1600	200	125	66	......	......	......
26	......	......	......	2090	3860	1440	180	117	66	......	......	......
27	......	......	......	2880	3580	1340	167	112	69	......	......	......
28	......	......	......	3300	4060	1040	162	112	80	......	......	......
29	......	......	......	4220	3160	838	154	112	80	......	......	......
30	......	......	......	5090	4200	764	220	112	77	......	......	......
31	......	......	......	......	3080	......	460	109	......	......	......	......
Total	......	......	......	29083	112380	66302	11631	5528	2406	......	......	......
Mean	......	......	......	1450	3630	2210	375	178	80.2	......	......	......
Max	......	......	......	5090	6950	3380	716	400	116	......	......	......
Min	......	......	......	......	1760	764	154	109	60	......	......	......
Acre-ft.	......	......	......	57500	223000	132000	23100	10900	4770	......	......	......

Discharge of Dolores River at Bedrock for 1921.

Drainage Area, 1,910 Square Miles. Altitude, 4,971 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	1340	3420	886	139	602	20	102	81
2	......	......	......	......	1760	3060	960	62	503	150	102	81
3	......	......	......	......	2460	2810	935	81	465	100	114	81
4	......	......	......	......	2780	2810	770	62	210	92	114	81
5	......	......	......	......	3120	2950	1210	54	340	166	102	81
6	......	......	......	......	3420	2640	662	46	256	114	102	81
7	......	......	......	......	3730	2600	642	32	240	102	102	81
8	......	......	......	......	2950	2700	522	16	180	81	102	81
9	......	......	......	......	2880	3200	288	11	152	81	102	81
10	......	......	......	......	2500	3610	240	102	126	81	102	81
11	......	......	......	......	2390	3610	288	92	102	81	102	81
12	......	......	......	......	2180	3610	446	72	81	81	81	81
13	......	......	......	......	2080	3160	256	114	92	92	81	81
14	......	......	......	......	2500	3610	288	46	62	81	81	81
15	......	......	......	1110	2420	3540	340	392	62	81	62	81
16	......	......	......	1130	2500	3380	428	240	32	102	72	81
17	......	......	......	1150	2880	3340	726	195	26	92	62	81
18	......	......	......	1170	3060	3060	960	225	20	92	81	81
19	......	......	......	1190	3160	2920	748	195	20	92	81	81
20	......	......	......	1200	3020	2670	503	272	16	92	62	81
21	......	......	......	1220	2140	2080	503	562	32	92	72	81
22	......	......	......	1240	2140	1700	392	562	20	92	54	81
23	......	......	......	1370	2360	1790	357	1670	11	92	46	81
24	......	......	......	1820	2420	1880	256	1610	16	92	32	81
25	......	......	......	1700	2640	2040	288	1240	20	410	114	81
26	......	......	......	1240	2740	1700	304	1790	20	152	81	81
27	......	......	......	1060	2530	1490	240	1210	20	152	102	81
28	......	......	......	1160	2600	1460	225	910	20	139	102	81
29	......	......	......	1160	3090	1340	304	960	20	139	102	81
30	......	......	......	1110	3420	1160	126	839	20	102	81	81
31	......	......	......	......	3460	......	92	748	......	102	......	81
Total	......	......	......	20030	82670	79340	15185	14549	3786	3437	2595	2511
Mean	......	......	......	1250	2670	2640	490	469	126	111	86.5	81
Max	......	......	......	......	3730	3610	1200	1790	602	410	114	......
Min	......	......	......	......	1340	1160	92	11	11	20	32	......
Acre-ft	......	......	......	39700	164000	157000	30100	28800	7500	6820	5150	4980

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Dolores River at Bedrock for 1922.

Drainage Area, 1,910 Square Miles. Altitude, 4,971 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			105		5390	3170	442	32	13			
2			93		5250	2330	442	25	4			
3			93		5110	1930	382	16	4			
4			88		4830	1550	307	50	4			
5			99		4760	1630	228	54	4			
6			99		4900	2030	179	50	4			
7			88		5040	3050	141	36	4			
8			88		5180	1750	119	25	4			
9			88		4970	2760	119	25	4			
10			93		4340	2810	119	25	4			
11			93		2810	3050	112	16	4			
12					2700	2430	105	13	4			
13					3360	2430	62	16	6			
14					4830	2480	25	16	6			
15					4690	2590	25	13	4			
16					3550	2030	32	16	4			
17					3050	1710	32	16	4			
18					3290	1470	25	16	4			
19					3880	1710	25	16	4			
20					3880	1590	32	13	4			
21					3880	1630	54	46	4			
22					3940	1470	25	67	4			
23					3620	1230	19	46	4			
24					3940	1330	19	19	4			
25					4270	1260	19	13	4			
26					4140	1110	13	13	4			
27					4000	840	16	13	4			
28					4070	740	19	8	4			
29					4200	715	16	4	4			
30					3740	621	39	4	4			
31					3550		28	4				
Total					129160	55446	3220	726	133			
Mean					4170	1850	104	23 4	4.43			
Max					5390	3170	442	67	13			
Min					2700	621	13	4	4			
Acre-ft.					256000	110000	6400	1440	264			

Discharge of Lost Canon Creek near Dolores for 1922.

Drainage Area, 81 Square Miles. Altitude, 6,943 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				32	502	47	2	2	0			
2				32	528	44	2	1	0			
3				32	487	29	2	0	0			
4				32	550	27	2	0	0			
5				33	576	36	1	0	0			
6				33	556	30	1	0	0			
7				33	540	25	0	0	0			
8				33	427	25	0	0	0			
9				34	302	24	0	0	0			
10				34	171	22	0	0	0			
11				34	171	20	0	0	0			
12				34	222	12	0	0	0			
13				25	324	9	0	0	0			
14				24	397	8	0	0	0			
15				52	352	7	0	0	0			
16				78	258	6	0	0	0			
17				23	270	5	0	0	0			
18				25	344	5	0	0	0			
19				63	324	5	0	0	0			
20				227	246	4	0	0	0			
21				388	283	4	0	0	0			
22				502	222	2	0	0	0			
23				457	211	3	0	0	0			
24				412	257	2	0	0	0			
25				418	175	2	0	0	0			
26				427	162	2	0	0	0			
27				427	90	2	0	0	0			
28				433	102	2	0	0	0			
29				540	74	2	0	0	0			
30				566	78	2	0	0	0			
31					66		0	0				
Total				5483	9267	413	10	3	0			
Mean				183	299	13.8	0.32	0 .1	0			
Max				566	576	47	2	2	0			
Min				23	66	2	1	1	0			
Acre-ft.				10900	18400	821	20	6	0			

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Miguel River at Naturita for 1921.

Drainage Area, 1,090 Square Miles. Altitude, 5,426 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	88	114	215	280	1560	1830	1510	892	640	109	132	116
2	90	110	190	348	1930	1880	1420	580	524	132	132	92
3	92	105	228	365	2440	1740	1420	524	448	116	132	88
4	94	105	240	570	2610	1780	1140	404	382	109	124	92
5	94	105	252	480	2390	1510	995	326	344	97	124	92
6	92	105	190	420	2500	1780	824	344	292	102	140	92
7	92	105	179	348	1780	2030	858	344	260	102	132	97
8	92	106	168	240	1260	2180	926	382	231	102	124	84
9	92	106	114	280	1420	2610	892	404	218	102	116	84
10	92	106	122	382	1260	2610	892	404	218	102	116	92
11	94	106	122	480	1100	2940	892	404	194	102	102	132
12	96	114	122	400	960	2880	960	382	170	102	92	102
13	98	122	114	440	1300	3060	1030	792	170	116	88	109
14	100	148	139	570	1340	3240	1140	760	148	116	88	132
15	100	168	158	570	1100	4160	1180	470	148	124	92	132
16	100	130	168	330	1640	3600	1260	382	148	124	92	116
17	102	106	202	382	1690	2560	1260	344	148	124	92	97
18	102	114	265	400	1690	1980	1260	344	148	116	92	102
19	104	106	312	710	1340	1930	1030	326	170	116	84	132
20	104	130	265	685	1380	1780	960	344	170	124	102	132
21	104	106	252	638	1180	1600	960	580	148	132	102	116
22	102	99	295	685	1140	1600	960	892	148	116	116	140
23	100	114	348	1120	1180	1880	892	1000	132	116	116	124
24	100	114	295	1040	1420	1830	824	892	132	124	109	116
25	98	179	280	760	1510	1780	892	1340	140	148	116	116
26	100	190	265	615	1510	1640	1030	960	132	140	109	102
27	104	190	252	570	1340	1640	892	858	109	124	102	116
28	108	202	215	710	1690	1640	824	700	109	116	102	124
29	112	....	252	710	1830	1460	760	730	97	132	116	148
30	116	....	295	960	2180	1510	580	640	102	132	116	159
31	120	....	265	....	2180	....	760	580	....	132	....	132
Total	3082	3505	6779	16488	49850	64660	31223	18324	6420	3649	3300	3508
Mean	99.4	125	219	550	1610	2160	1010	591	214	118	110	113
Max	120	202	348	1120	2610	4160	1510	1340	640	148	140	159
Min	88	99	114	240	960	1460	580	326	97	97	84	84
Acre-ft.	6110	6940	13500	32700	99000	129000	62100	36300	12700	7260	6550	6950

Discharge of San Miguel River at Naturita for 1922.

Drainage Area, 1,090 Square Miles. Alttude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	94	60	53	148	2540	1400	975	621	86	....	....	....
2	79	60	50	182	2260	1200	872	355	86	....	....	....
3	86	70	58	251	2160	1120	742	300	86	....	....	....
4	119	60	79	374	2010	1240	742	266	102	....	....	....
5	50	60	72	487	2210	1240	680	222	86	....	....	....
6	44	60	72	336	2480	1280	621	148	72	....	....	....
7	46	60	62	251	2590	1280	593	138	62	....	....	....
8	46	80	62	283	2160	1760	512	148	62	....	....	....
9	43	100	67	318	1860	1810	487	159	62	....	....	....
10	50	140	70	195	1620	1670	462	128	62	....	....	....
11	62	150	86	208	1320	1670	374	159	53	....	....	....
12	50	130	62	266	1400	1670	374	148	53	....	....	....
13	50	130	72	208	1440	1670	336	138	53	....	....	....
14	50	130	72	182	1490	1670	336	138	53	....	....	....
15	50	130	86	251	1320	1400	336	138	53	....	....	....
16	50	125	72	336	1040	1320	266	148	53	....	....	....
17	50	125	159	222	1120	1200	251	208	53	....	....	....
18	50	120	182	195	1440	1240	266	336	46	....	....	....
19	50	120	138	182	1580	1320	236	300	46	....	....	....
20	60	120	148	318	1540	1320	236	208	53	....	....	....
21	60	120	138	711	1810	1240	236	182	50	....	....	....
22	60	119	195	1080	1760	1240	251	159	46	....	....	....
23	60	119	300	1540	1810	1240	236	138	46	....	....	....
24	60	86	300	1670	1960	1200	195	138	46	....	....	....
25	60	79	266	1540	2160	1080	182	119	46	....	....	....
26	60	62	266	1670	1960	1010	170	86	50	....	....	....
27	60	58	266	1960	1960	975	182	79	53	....	....	....
28	60	58	182	2060	2060	872	195	79	53	....	....	....
29	60	....	148	2210	1860	806	208	86	53	....	....	....
30	60	....	148	2540	1410	1010	236	86	53	....	....	....
31	60	....	138	....	1720	....	266	86	....	....	....	....
Total	1849	2731	4071	22174	56550	39153	12054	5644	1778	....	....	....
Mean	59.6	97.5	131	739	1820	1300	389	182	59.3	....	....	....
Max	....	....	300	2540	2590	1810	975	621	102	....	....	....
Min	....	....	50	148	1040	806	170	79	46	....	....	....
Acre-ft.	3660	5410	8060	44000	112000	77400	23900	11200	3530	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

SAN JUAN RIVER DRAINAGE

State Engineer of New Mexico and

D. S. Jones, Jr., State Hydrographer

SAN JUAN RIVER AT ROSA, NEW MEXICO

Location—In Sec. 11, T. 32 N., R. 6 W., at highway bridge one-half mile north of Rosa, New Mexico.

Records Available—October 1, 1920, to September 30, 1922. From 1895 to 1899 and from August 21, 1910, to September 30, 1920, this station was maintained at Arboles. The San Juan River records at Arboles, plus the Piedra River records at Arboles, will give the discharge of the San Juan River at Rosa.

Drainage Area—2044 square miles.

Gage—Automatic register.

Discharge Measurements—From bridge during high and intermediate stages and wading at low stages.

Co-operation—Records furnished by the State Engineer of New Mexico.

NAVAJO RIVER AT EDITH

Location—At the Denver & Rio Grande Railroad bridge at Ar-

Location—Six miles northeast of Lumberton, New Mexico, at the highway bridge on the Lumberton-Edith road, one-eighth mile east of Edith, a short distance north of the New Mexico-Colorado State line, near the southwest corner of T. 33 N., R. 1 E., about 5 miles downstream from the confluence of Navajo and Little Navajo Rivers. A small tributary enters from the north about one-fourth mile below the station.

Records Available—September 21, 1912, to September 30, 1922.

Drainage Area—Not measured.

Gage—Vertical staff.

Channel—Liable to small shifts.

Discharge Measurements—Made from the bridge or by wading.

Winter Conditions—Ice forms during the winter months.

Co-operation—Records furnished by State Engineer of New Mexico.

PIEDRA RIVER AT ARBOLES

boles, in Sec. 16, T. 33 N., R. 5 W. The Piedra empties into the San Juan one-half mile below the station.

Records Available—June 19, 1895, to September 30, 1899; August 21, 1910, to September 30, 1922.

Drainage Area—650 square miles.

Gage—Chain gage.

Channel—Permanent except during high water.

Discharge Measurements—Made from the railroad bridge or by wading.

Co-operation—Records furnished by the State Engineer of New Mexico.

LOS PINOS RIVER NEAR IGNACIO

Location—At the highway bridge at the Southern Ute Indian Agency, near Sec. 8, T. 33 N., R. 7 W. The nearest tributary is a small stream entering from the west about 2 miles below the station.

Records Available—April 22, 1899, to October 31, 1903; September 1, 1910, to November 30, 1912; March 10, 1913, to September 30, 1922.

Drainage Area—450 square miles.

Gage—Chain.

Channel—Shifting.

Discharge Measurements—Made from the bridge or by wading.

Winter Conditions—The gage height and discharge relation may be affected by ice during winter months.

Co-operation—Records furnished by the State Engineer of New Mexico.

ANIMAS RIVER AT DURANGO

Location—At the footbridge at the foot of Fourteenth Street in Durango, near the power plant of the San Juan Water & Power Co. Junction Creek enters about three-fourths of a mile above, and Lightner Creek about the same distance below the station.

Records Available—June 20, 1895, to December 31, 1905; January 1, 1910, to September 30, 1922.

Drainage Area—694 square miles (from Hayden's Atlas).

Gage—Staff and automtic gages.

Channel—Permanent.

Discharge Measurements—Made from cable.

Winter Conditions—Ice rarely forms.

Floods—The maximum observed gage height was 13.6 feet in October, 1911.

Co-operation—Records furnished by the State Engineer of New Mexico.

HERMOSA CREEK AT HERMOSA

Location—In Sec. 34, T. 37 N., R. 9 W., at private highway bridge just below Lee's Ranch about one mile above Hermosa.

Records Available—April 18, 1920, to September 30, 1922.

Drainage Area—168 square miles.

Gage—Automatic and staff gages.

Channel—Boulders and cobbles.

Discharge Measurements—Wading at low stages and from bridge at high stages.

FLORIDA RIVER NEAR DURANGO

Location—At wagon bridge on the Upper Florida River about eight miles from Durango.

Records Available—May 21, 1899, July 31, 1899; April 1, 1901, October 5, 1903; September 18, 1910, to September 30, 1922.

Drainage Area—96 square miles.

Gage—Vertical staff. This gage has no relation to gage established September 18, 1910.

Channel—Probably shifting.

Discharge Measurements—Made from bridge or by wading.

Winter Conditions—Ice forms during winter months.

Co-operation—Maintained in co-operation with the State Engineer of New Mexico.

LA PLATA RIVER AT HESPERUS

Location—At railroad bridge on Upper La Plata about 800 feet northwest of Hesperus railroad station.

Records Available—June 15, 1904, to August 11, 1904; April 1, 1906, to August 11, 1906; August 24, 1910, to December 31, 1910; May 25, 1917, to September 30, 1922.

Drainage Area—37 square miles.

Gage—Vertical staff and automatic gages.

Channel—Probably shifts.

Winter Conditions—Ice forms during winter months.

Co-operation—Maintained in co-operation with the State Engineer of New Mexico.

LA PLATA RIVER COLORADO-NEW MEXICO LINE NEAR PENDELTON, NEW MEXICO

Location—In Sec. 10, T. 32 S., R. 13 W., 1,000 feet north of State Line and three miles from Pendleton, New Mexico.

Records Available—February 19, 1920, to September 30, 1922.

Gage—Automatic and staff gages.

Channel—Slightly shifting.

Discharge Measurements—From foot bridge during high stages and wading at low stages.

MANCOS RIVER AT MANCOS

Location—Fifty feet below Main Street bridge in the town of Mancos. During 1921 station maintained at Reads ranch, three miles east of Mancos.

Records Available—February 1, 1921, to September 30, 1922.

Drainage Area—83 square miles.

Gage—Staff gage.

Discharge Measurements—Made from bridge during high stages and wading at low stages.

MANCOS RIVER NEAR TOWAOC

Location—At Ute Indian farm in Sec. 15, T. 32 S., R. 18 W. One and one-ralf miles north of State Line and sixteen miles above the mouth.

Records Available—February 1, 1921, to September 30, 1922.

Gage—Enamel staff gage on center pier of bridge on Cortez-Shiprock road.

Channel—Shifting.

Discharge Measurements—From bridge during high stages and wading at low stages.

Note—The erratic discharge of this station is due to cloud bursts on Chaplin Mesa.

ERRATA

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San Juan River at Rosa, N. M., for 1921.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16........	440	280	987	996	4300	6950	2520	1560	770	325	175	171

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La Plata River at Colorado-New Mexico Line for 1922.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8........	14	10	32	79	330	96	0	0	0.4	....	....	....

Discharge of San Juan River at Rosa, N. M. for 1921.

Drainage Area, 2,044 Square Miles. Altitude, 6,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1........	380	280	1110	830	2060	5470	2270	1970	1870	425	230	245
2........	380	230	1240	790	2650	5510	2590	1730	1800	680	230	270
3........	410	230	1290	870	3070	5330	2460	3070	1720	550	220	198
4........	440	205	1850	915	3570	6180	2330	2790	1400	455	198	198
5........	440	185	2150	830	3730	5330	2390	2930	1400	420	198	175
6........	470	255	1850	790	4810	5420	2450	1150	1130	420	220	150
7........	500	230	2150	830	3320	4270	1850	2030	1070	420	220	174
8........	535	205	1350	870	2790	5190	1730	1450	980	420	198	198
9........	440	145	870	790	2450	6000	1730	2030	900	425	198	169
10........	440	230	1050	960	2210	7540	1670	1010	810	455	175	169
11........	470	230	640	1190	2030	7150	1730	1050	960	400	175	170
12........	440	255	640	1370	2390	7630	1670	1010	800	370	198	170
13........	500	255	675	1190	2450	7980	1560	960	645	350	175	170
14........	440	280	750	915	2520	7200	1910	1350	800	350	198	171
15........	380	280	1110	870	2790	9120	2090	1620	850	325	175	171
16........	36	33	54	150	630	1310	185	118	72	54	44	43
17........	570	305	790	960	3800	6540	1910	1100	695	308	150	172
18........	570	330	1050	1050	3730	4940	1850	1250	770	330	150	172
19........	570	330	1100	1100	2450	5510	1850	1600	795	308	150	172
20........	710	330	1150	1290	3070	4130	1910	2230	750	265	175	173
21........	640	305	1110	1190	3000	3430	2090	2850	600	270	150	173
22........	570	330	870	1350	3030	3280	2150	3710	600	240	175	174
23........	535	355	790	2030	3070	3800	2090	3550	580	290	198	174
24........	640	410	830	1510	4210	4470	1850	4430	520	290	220	174
25........	640	605	1010	1620	4300	3730	2790	3490	580	300	270	175
26........	605	710	978	1400	3830	3730	2930	3450	520	250	245	175
27........	440	830	960	1150	3930	2650	1910	3020	505	250	220	175
28........	440	830	960	1150	4980	2930	1970	2590	450	250	350	176
29........	360	....	870	1290	4730	3280	1910	2160	450	205	300	176
30........	280	....	870	1350	5420	2210	1790	2000	450	230	300	176
31........	280	....	915	....	5420	....	1880	2000	....	260	....	177
Total	14955	9445	33965	33446	106110	156900	63830	67140	26170	10836	6236	5583
Mean..	482	337	1100	1110	3420	5230	2060	2170	872	350	208	180
Max....	710	830	2150	2030	5420	9120	2930	4430	1870	680	350	270
Min.....	280	145	640	790	2030	2210	1560	1010	450	205	150	150
Acre-ft.	29700	18700	67400	66300	210000	311000	127000	133000	51900	21500	12400	11100

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of San Juan River at Rosa, N. M. for 1922.

Drainage Area, 2044 Square Miles. Altitude, 6,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	177	188	290	1420	5710	5500	2700	522	277	....	....	....
2	177	188	315	1820	5560	4550	2530	388	268	....	....	....
3	178	192	325	2020	5570	4210	2210	312	280	....	....	....
4	178	196	290	2700	5500	4590	2060	294	268	....	....	....
5	178	199	418	2350	5820	5180	2180	376	290	....	....	....
6	179	203	340	2130	6620	5260	1910	370	262	....	....	....
7	179	207	315	1920	6800	5560	1750	326	229	....	....	....
8	180	211	315	1820	6150	6360	1530	287	211	....	....	....
9	180	215	250	1740	5480	6740	1360	326	196	....	....	....
10	180	218	340	1660	4790	6890	1250	326	181	....	....	....
11	181	222	290	1580	3900	6160	1110	348	169	....	....	....
12	181	226	280	2020	3360	6060	1000	326	158	....	....	....
13	181	230	418	1600	3170	5940	912	348	145	....	....	....
14	182	234	620	1360	3130	6230	880	430	135	....	....	....
15	182	237	590	1820	3350	5660	825	864	134	....	....	....
16	182	241	620	2230	3300	5090	765	765	133	....	....	....
17	183	245	750	1640	4000	4980	690	698	133	....	....	....
18	183	249	650	1210	5150	5110	742	818	132	....	....	....
19	183	253	1270	1400	5200	4760	780	742	132	....	....	....
20	184	256	1360	2150	4960	4860	728	735	131	....	....	....
21	184	260	1400	3280	5500	4720	600	648	130	....	....	....
22	184	264	1540	4680	5160	4590	496	555	130	....	....	....
23	185	268	1400	4900	5780	4400	424	503	129	....	....	....
24	185	272	1450	5000	5990	4030	376	448	129	....	....	....
25	185	275	1800	5240	6230	3980	326	382	128	....	....	....
26	186	279	1500	5440	6380	3590	308	342	127	....	....	....
27	186	283	1540	5190	6780	3350	332	315	127	....	....	....
28	186	287	1280	4750	6670	2950	320	315	126	....	....	....
29	187	....	1110	4720	6580	2900	304	332	126	....	....	....
30	187	....	1190	5240	6520	3020	301	315	125	....	....	....
31	188	....	1030	....	6270	....	478	298	....	....	....	....
Total	5651	6598	25286	85030	165380	147220	32177	14054	5141	....	....	....
Mean	182	236	816	2830	5330	4910	1040	453	171	....	....	....
Max	188	287	1800	5440	6800	6890	2700	864	290	....	....	....
Min	177	188	250	1210	3130	2900	301	298	125	....	....	....
Acre-ft.	11200	13100	50200	168000	328000	292000	64000	27900	10200	....	....	....

Discharge of Navajo River at Edith for 1921.

Drainage Area, ... Square Miles. Altitude, 7,100 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39	33	37	54	280	850	372	230	148	72	38	44
2	39	33	38	54	423	740	333	230	148	72	44	44
3	39	33	38	54	495	740	280	230	118	72	44	44
4	39	33	38	150	495	740	255	230	118	72	44	44
5	38	33	39	185	580	630	230	230	118	72	44	44
6	38	33	39	185	630	580	230	230	118	72	44	44
7	38	32	39	72	495	535	185	230	118	72	44	44
8	38	32	40	72	423	630	185	118	118	72	44	44
9	38	32	40	93	360	792	185	118	118	54	44	44
10	37	32	40	93	333	850	185	118	118	54	44	44
11	37	32	40	150	305	850	185	118	72	54	44	44
12	37	32	46	230	280	1060	185	230	72	54	44	44
13	37	32	54	230	305	850	185	230	72	54	44	44
14	37	32	54	185	333	850	185	230	72	54	44	44
15	36	32	54	118	423	2830	230	118	72	54	44	44
16	36	33	54	150	630	1310	185	118	72	54	44	43
17	36	33	118	185	740	915	185	118	72	54	44	43
18	36	33	118	230	740	740	185	166	72	54	44	43
19	36	34	118	207	740	740	185	230	72	54	44	43
20	35	34	118	207	535	740	255	166	72	54	44	43
21	35	34	118	185	423	630	207	915	72	54	44	43
22	35	35	118	166	423	580	230	535	72	54	44	42
23	35	35	118	255	460	535	230	460	72	54	44	42
24	35	35	118	185	535	535	230	460	72	54	44	42
25	35	36	118	255	535	535	280	254	72	54	44	42
26	34	36	82	207	630	535	333	185	72	44	44	42
27	34	36	54	150	740	535	333	148	72	44	44	42
28	34	37	54	166	630	535	423	148	72	54	44	42
29	34	....	54	133	740	535	460	148	72	54	44	41
30	34	....	54	280	740	535	333	148	72	54	44	41
31	34	....	54	....	850	....	230	148	....	44	....	41
Total	1125	937	2104	4886	16251	23462	7690	7237	2680	1788	1314	1335
Mean	36.3	33.5	67.9	163	524	782	248	233	89.3	57.7	43.8	43.1
Max	....	....	118	380	850	2830	460	915	148	72	44	44
Min	....	....	37	54	280	535	185	118	72	44	38	41
Acre-ft.	2230	1860	4170	9690	32200	46500	15200	14400	5310	3550	2610	2650

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Navajo River at Edith for 1922.

Drainage Area, ... Square Miles. Altitude, 7,100 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	41	36	81	280	825	970	343	75	42	....	....	....
2........	41	36	83	280	825	955	234	75	42	....	....	....
3........	41	36	85	305	820	950	234	75	42	....	....	....
4........	40	36	86	458	1010	930	234	75	42	....	....	....
5........	40	38	88	458	937	805	234	75	34	....	....	....
6........	40	40	90	280	920	920	205	75	34	....	....	....
7........	40	41	92	423	1130	685	178	57	34	....	....	....
8........	40	43	94	423	925	581	178	57	34	....	....	....
9........	40	45	95	332	850	900	178	42	34	....	....	....
10........	40	47	97	230	848	890	165	42	34	....	....	....
11........	39	49	99	230	628	774	165	42	34	....	....	....
12........	39	50	101	230	620	559	165	42	34	....	....	....
13........	39	52	103	185	614	552	165	42	34	....	....	....
14........	39	54	104	185	609	544	153	42	34	....	....	....
15........	39	56	106	631	605	538	153	42	34	....	....	....
16........	39	58	108	165	600	532	153	47	34	....	....	....
17........	39	59	110	165	698	529	128	57	34	....	....	....
18........	38	61	112	145	589	526	128	66	34	....	....	....
19........	38	63	113	180	587	520	128	106	34	....	....	....
20........	38	65	115	443	682	516	128	117	34	....	....	....
21........	38	67	118	660	580	490	128	75	34	....	....	....
22........	38	68	118	707	670	490	128	47	34	....	....	....
23........	38	70	185	1150	945	360	106	47	34	....	....	....
24........	38	72	185	930	1460	360	96	42	34	....	....	....
25........	37	74	149	695	1550	360	96	42	34	....	....	....
26........	37	76	207	684	1530	360	96	42	34	....	....	....
27........	37	77	149	590	1520	360	96	42	34	....	....	....
28........	37	79	149	680	1590	343	96	42	34	....	....	....
29........	37	....	133	674	1410	343	96	42	34	....	....	....
30........	37	....	133	621	980	343	96	42	34	....	....	....
31........	36	....	149	....	922	....	75	42	....	....	....	....
Total	1200	1548	3637	13419	28479	17985	4758	1756	1052	....	....	....
Mean..	38.7	55.3	117	447	919	600	153	56.6	35.1	....	....	....
Max....	41	79	207	1150	1590	970	343	117	42	....	....	....
Min.....	36	36	81	145	580	343	75	42	34	....	....	....
Acre-ft.	2380	3070	7210	26600	56500	35700	9440	3480	2090	....	....	....

Discharge of Piedra River at Arboles for 1921.

Drainage Area, 650 Square Miles. Altitude, 6,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	280	110	550	740	940	2236	1090	650	594	111	105	92
2........	268	94	600	836	1720	2116	1090	798	510	105	105	76
3........	268	94	700	780	1510	2320	960	1090	477	100	105	80
4........	260	98	820	804	1780	2770	1060	815	418	105	92	80
5........	250	94	645	645	1930	2500	2060	458	350	142	92	70
6........	260	108	585	622	2080	1930	863	330	290	135	88	80
7........	268	122	550	622	1540	1710	714	930	300	142	85	76
8........	260	102	445	600	1160	1860	636	863	300	142	85	76
9........	228	94	350	412	964	2560	1060	911	290	129	85	76
10........	232	94	308	478	940	3060	910	960	266	111	80	76
11........	228	109	380	499	884	3260	615	1110	266	105	80	76
12........	232	100	332	900	836	2810	650	390	235	105	80	76
13........	250	105	320	676	916	3160	566	401	223	120	85	76
14........	210	105	478	700	1022	2960	798	380	223	151	85	75
15........	200	109	622	586	1180	3190	730	350	203	128	85	75
16........	220	121	550	571	1112	2530	1160	243	253	105	85	75
17........	240	131	550	585	1240	2410	891	235	232	105	85	75
18........	232	140	585	550	2020	2210	747	248	211	105	85	75
19........	250	140	478	571	836	2110	834	290	290	111	85	75
20........	268	128	478	600	997	1830	714	860	223	80	85	74
21........	250	115	478	645	1720	1510	1010	1430	196	85	80	74
22........	240	121	645	645	1500	1530	666	1860	196	92	80	74
23........	198	121	585	724	1380	1810	666	1690	175	111	85	74
24........	170	125	585	645	2080	2030	714	960	152	105	85	74
25........	200	160	600	700	1924	1840	747	1190	129	120	100	74
26........	122	173	571	622	1876	1650	834	1490	161	120	85	74
27........	122	332	600	622	1924	1460	747	1390	161	129	85	73
28........	118	380	585	622	1924	1910	798	1060	142	111	76	73
29........	106	....	804	740	2140	1210	747	863	129	105	76	73
30........	94	....	622	860	2320	960	730	690	120	92	80	73
31........	94	....	724	....	2320	....	690	650	....	100	....	73
Total	6618	3725	17125	19601	46715	65442	26467	25585	7715	3507	2594	2343
Mean..	213	133	552	653	1510	2180	855	825	257	113	86.5	75.6
Max....	280	380	820	900	2320	3260	2060	1860	594	142	105	92
Min.....	94	94	308	412	836	960	566	235	120	80	76	73
Acre-ft.	13100	7390	34000	38900	92600	130000	52500	50700	15300	6950	5140	4650

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Piedra River at Arboles for 1922.

Drainage Area, 650 Square Miles. Altitude, 6,000 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	73	68	114	517	2660	2420	1020	292	115	....	....	....
2	72	68	108	528	2640	2260	916	181	102	....	....	....
3	72	70	99	588	2430	2050	818	157	119	....	....	....
4	72	71	90	1020	2300	1630	731	140	115	....	....	....
5	72	73	90	900	2370	2050	731	174	140	....	....	....
6	72	75	84	600	2760	2220	682	208	108	....	....	....
7	72	76	99	600	2590	1670	620	191	98	....	....	....
8	72	78	122	662	2600	2590	562	174	89	....	....	....
9	71	80	133	914	2540	2640	506	157	80	....	....	....
10	71	82	172	712	2300	2640	468	174	74	....	....	....
11	71	83	160	638	1820	2280	422	157	67	....	....	....
12	71	85	192	900	1490	2130	387	130	67	....	....	....
13	71	87	122	844	1570	2170	369	140	64	....	....	....
14	71	88	133	644	1490	2300	335	301	61	....	....	....
15	71	90	122	718	1570	2020	301	515	56	....	....	....
16	70	92	201	1030	1520	1820	258	524	56	....	....	....
17	70	94	517	790	1650	1790	271	459	56	....	....	....
18	70	95	464	638	2260	1740	229	335	51	....	....	....
19	70	97	144	744	1820	2000	216	378	48	....	....	....
20	70	99	144	984	1890	1590	229	378	56	....	....	....
21	70	100	144	1430	2000	1600	229	344	51	....	....	....
22	70	102	201	2350	2130	1540	174	314	48	....	....	....
23	69	104	236	2280	2130	1540	157	271	48	....	....	....
24	69	105	271	2090	2340	1480	130	250	48	....	....	....
25	69	107	302	2260	2350	1060	130	216	48	....	....	....
26	69	109	528	2280	2390	1210	123	157	48	....	....	....
27	69	110	600	2330	2980	1180	130	143	48	....	....	....
28	69	112	540	2330	2870	1060	123	130	48	....	....	....
29	68	....	528	2300	2870	961	123	140	48	....	....	....
30	68	....	464	2330	2850	1120	140	136	48	....	....	....
31	68	....	486	....	2420	....	250	123	....	....	....	....
Total	2182	2500	7610	36951	69600	54761	11780	7389	2105	....	....	....
Mean	70.4	89.3	245	1230	2250	1830	380	238	70.2	....	....	....
Max	73	112	600	2350	2980	2640	1020	524	140	....	....	....
Min	68	68	84	517	1490	961	123	123	48	....	....	....
Acre-ft.	4330	4960	15100	73200	138000	109000	23400	14700	4170	....	....	....

Discharge of Los Pinos River Near Ignacio for 1921.

Drainage Area, 450 Square Miles. Altitude, 6,480 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	84	88	218	306	810	2120	1180	538	692	38	93	59
2	84	72	225	331	1351	2270	1050	410	546	40	87	89
3	118	80	278	400	1439	2390	1290	312	416	40	85	93
4	155	94	335	462	1820	2510	1220	274	330	40	85	83
5	166	92	348	489	1950	2370	1090	212	285	33	83	71
6	160	86	290	436	2140	2150	785	167	257	36	82	87
7	140	96	259	423	1670	1820	738	142	221	33	83	89
8	126	82	218	344	1202	2140	669	158	234	33	80	93
9	109	67	171	356	954	2560	592	149	158	33	79	93
10	126	82	212	348	775	2960	553	114	138	32	80	92
11	138	86	205	331	754	2860	523	116	122	39	79	92
12	155	88	191	427	719	2760	553	106	116	40	83	92
13	128	94	196	409	980	2750	600	108	110	41	80	92
14	88	115	209	423	971	2810	507	127	95	41	85	92
15	118	134	294	378	1041	2620	661	151	82	41	75	91
16	132	88	298	348	1260	2580	969	127	96	44	77	91
17	142	88	302	365	1270	2330	946	96	87	40	83	91
18	160	102	323	339	1310	2210	785	83	83	39	82	91
19	170	106	365	365	1212	1850	738	87	112	37	71	90
20	165	102	365	423	1088	1810	615	108	87	38	75	90
21	132	102	323	432	908	1610	1010	646	79	75	82	90
22	128	92	310	467	848	1810	885	1820	73	75	92	90
23	176	104	310	598	916	1970	761	1810	68	69	92	90
24	140	124	298	789	1260	1900	777	1780	68	79	93	89
25	112	129	294	652	1212	1870	777	1680	67	110	50	89
26	105	143	339	539	1164	1660	1150	1520	61	96	45	89
27	138	166	282	473	1212	1710	1080	1180	55	89	40	89
28	130	194	263	427	1782	1690	962	854	52	92	39	88
29	120	....	286	414	1980	1440	723	800	51	89	41	88
30	83	....	278	539	2420	1230	607	623	52	95	41	88
31	90	....	286	....	2420	....	507	500	....	93	....	88
Total	4018	2896	8571	13033	40838	64760	25303	16798	4893	1720	2242	2739
Mean	130	103	276	434	1320	2160	816	542	163	55.5	74.7	88.4
Max	176	194	365	789	2420	2960	1290	1820	692	110	93	93
Min	83	67	171	306	719	1230	507	83	51	32	39	71
Acre-ft.	7970	5740	17000	25800	81000	128000	50200	33300	9700	3410	4450	5430

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Los Pinos River at Ignacio for 1922.

Drainage Area, 450 Square Miles. Altitude, 6,480 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	88	81	113	228	1160	1740	894	100	34	....	....	....
2........	87	86	104	251	1190	1380	888	59	30	....	....	....
3........	87	91	106	361	1350	1350	769	47	30	....	....	....
4........	87	96	111	537	1350	1610	732	39	32	....	....	....
5........	87	100	127	629	1470	2110	668	35	30	....	....	....
6........	86	105	108	474	1760	2290	635	37	28	....	....	....
7........	86	110	102	371	1810	2170	542	43	26	....	....	....
8........	86	115	106	458	1560	2490	484	42	22	....	....	....
9........	86	120	108	479	1410	2550	376	42	22	....	....	....
10........	86	125	95	356	1170	2550	287	33	22	....	....	....
11........	85	129	106	406	1000	2280	239	23	19	....	....	....
12........	85	134	111	479	831	2220	210	26	12	....	....	....
13........	85	139	106	342	888	2210	173	25	10	....	....	....
14........	85	144	129	322	881	2320	115	70	9.6	....	....	....
15........	85	149	144	406	926	2000	82	300	10	....	....	....
16........	84	154	187	484	939	1780	75	168	9.6	....	....	....
17........	84	158	313	361	920	1750	62	108	10	....	....	....
18........	84	163	210	279	1290	1800	34	113	9.6	....	....	....
19........	84	168	199	351	1390	1760	39	118	8.8	....	....	....
20........	83	173	213	505	1210	1740	38	148	10	....	....	....
21........	83	144	228	680	1460	1720	31	117	8.4	....	....	....
22........	83	127	266	907	1480	1550	26	108	8.8	....	....	....
23........	83	113	327	984	1670	1560	26	84	8.4	....	....	....
24........	83	111	366	965	1930	1380	23	58	8.4	....	....	....
25........	82	115	351	971	2010	1320	20	41	7.2	....	....	....
26........	82	115	371	1060	2140	1140	21	38	8.4	....	....	....
27........	82	113	381	991	2230	1140	23	37	8	....	....	....
28........	82	122	327	952	2380	1020	25	34	9.6	....	....	....
29........	81	....	270	965	2340	894	25	31	14	....	....	....
30........	81	....	255	1060	2400	933	36	32	12	....	....	....
31........	81	....	274	....	2300	....	67	29	....	....	....	....
Total	2613	3500	6214	17614	46845	52757	7665	2185	477.8	....	....	....
Mean..	84.3	125	200	587	1510	1760	247	70.5	15.9	....	....	....
Max....	88	173	381	1060	2400	2550	894	300	34	....	....	....
Min.....	81	81	95	228	831	894	20	23	7.2	....	....	....
Acre-ft.	5180	6940	12300	34900	92800	105000	15200	4330	947	....	....	....

Discharge of Animas River at Durango for 1921.

Drainage Area, 694 Square Miles. Altitude, 6,550 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	255	220	330	619	1200	4890	3520	1300	1410	340	260	260
2........	255	214	388	689	1950	4660	3760	1210	1280	377	265	265
3........	238	214	488	805	2450	4830	3760	1130	1140	394	255	265
4........	248	208	612	900	3020	5100	3180	1040	1020	377	252	220
5........	248	205	605	900	3590	4800	2520	995	926	366	248	208
6........	220	205	462	782	3900	3740	2060	941	871	350	248	215
7........	214	208	423	703	2760	3280	2110	895	836	366	238	234
8........	205	214	388	572	1950	4290	2130	942	767	366	238	238
9........	205	214	350	585	1600	6000	2130	991	745	355	230	248
10........	214	214	340	661	1380	7950	2000	926	737	345	224	252
11........	220	220	330	790	1330	8450	2060	926	660	345	234	255
12........	220	220	315	985	1380	8400	2170	864	620	340	238	252
13........	220	220	335	951	1780	9100	2070	849	580	335	252	248
14........	220	220	350	876	2010	9300	2240	849	577	295	255	227
15........	220	220	372	820	2200	8360	2390	991	574	285	255	238
16........	214	214	366	745	2550	8170	2330	911	606	280	255	238
17........	208	214	382	724	2930	6850	2060	841	600	270	255	248
18........	220	217	468	688	2620	5870	1980	759	561	265	255	248
19........	214	220	579	790	2320	4660	1960	818	548	255	212	241
20........	214	220	598	905	1990	4060	1860	902	492	252	215	238
21........	205	224	553	900	1920	4050	1880	1380	462	248	227	227
22........	208	248	540	915	2010	4430	1940	2450	439	241	234	248
23........	211	255	572	1190	2020	4940	1900	3030	427	241	230	238
24........	220	275	592	1305	2170	5150	1840	2800	410	244	234	238
25........	220	252	626	1110	2570	5150	1820	3270	399	295	241	238
26........	214	255	640	950	2320	4670	2320	2710	393	285	244	241
27........	214	265	546	835	2600	4700	2060	2000	371	260	248	248
28........	214	295	475	790	3580	4500	1700	1800	361	255	248	248
29........	217	....	475	760	4160	4240	1510	1630	355	248	248	248
30........	220	....	540	870	4840	3780	1350	1460	344	255	252	248
31........	220	....	579	....	5200	....	1280	1470	....	260	....	248
Total	6835	6370	14619	25110	78300	168370	67890	43080	19501	9390	7290	7508
Mean..	220	228	478	837	2530	5610	2190	1390	650	303	243	242
Max....	255	295	640	1300	5200	9300	3760	3030	1410	394	265	265
Min.....	205	205	315	619	1200	3280	1280	818	344	241	212	208
Acre-ft.	13500	12600	29000	49800	155000	334000	135000	85400	38700	18600	14500	14900

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Animas River at Durango for 1922.

Drainage Area, 694 Square Miles. Altitude, 6,550 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	248	220	200	433	2590	4370	3020	812	410	....	....	....
2	215	227	208	445	2740	3470	2780	745	410	....	....	....
3	220	227	220	474	3040	2990	2560	697	405	....	....	....
4	224	227	220	474	3040	3260	2490	632	394	....	....	....
5	208	227	227	422	3570	4130	2420	612	394	....	....	....
6	220	227	227	439	4350	4900	2220	600	372	....	....	....
7	220	220	238	474	4640	5160	1980	586	361	....	....	....
8	208	220	227	451	4280	6220	1810	560	350	....	....	....
9	195	234	234	399	3550	6780	1680	541	340	....	....	....
10	195	241	238	377	2760	7000	1540	528	330	....	....	....
11	170	238	238	422	2100	6430	1400	528	320	....	....	....
12	175	234	238	505	1730	6280	1350	515	310	....	....	....
13	195	227	248	606	1610	6320	1250	510	310	....	....	....
14	200	224	265	1080	1790	6500	1190	548	300	....	....	....
15	203	238	265	1620	2140	5640	1120	600	295	....	....	....
16	215	238	248	1630	2080	5040	1020	574	290	....	....	....
17	220	238	255	1640	2300	4700	932	638	280	....	....	....
18	220	238	255	1650	3200	5000	884	684	270	....	....	....
19	224	238	255	1660	3570	5220	916	704	270	....	....	....
20	230	238	295	1670	3230	5240	900	697	260	....	....	....
21	220	248	315	1680	3720	4780	884	658	242	....	....	....
22	220	234	366	1690	3840	4640	828	632	234	....	....	....
23	224	215	410	1700	4170	4680	766	580	234	....	....	....
24	220	220	517	1690	4740	4220	731	522	230	....	....	....
25	220	238	535	1600	5100	3720	697	488	230	....	....	....
26	220	234	561	1600	5360	3570	658	460	234	....	....	....
27	224	227	580	1530	5950	3740	652	438	238	....	....	....
28	227	200	548	1660	6070	3360	664	438	242	....	....	....
29	227	....	505	1610	5860	3020	697	427	260	....	....	....
30	215	....	474	2000	6220	3110	697	422	250	....	....	....
31	220	....	439	....	5620	....	799	416	....	....	....	....
Total	6642	6437	10051	33631	114960	143490	41535	17792	9065	....	....	....
Mean	214	230	324	1120	3710	4780	1340	574	302	....	....	....
Max	248	248	580	2000	6220	7000	3020	812	410	....	....	....
Min	170	200	200	377	1610	2990	652	416	230	....	....	....
Acre-ft.	13200	12800	19900	66600	228000	284000	82400	35300	18000	....	....	....

Discharge of Hermosa Creek at Hermosa for 1921.

Drainage Area, 168 Square Miles. Altitude, 6,700 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	111	815	1090	318	101	165	45	....	....
2	....	....	....	265	1040	1020	305	120	140	54	....	....
3	....	....	....	345	995	1160	267	101	126	45	....	....
4	....	....	....	310	950	1110	305	90	114	45	....	....
5	....	24	....	216	928	1240	232	84	101	43	....	....
6	....	....	....	198	882	936	192	79	90	43	....	....
7	....	....	....	200	770	1020	174	79	84	43	....	....
8	....	....	....	165	645	1180	156	74	79	41	....	....
9	....	....	65	148	530	1280	156	79	74	41	....	....
10	....	....	70	232	512	1240	148	101	69	41	....	....
11	....	....	72	332	512	1280	140	79	69	41	....	....
12	....	....	73	430	770	1140	140	79	65	39	....	....
13	....	....	68	287	725	1130	133	69	61	39	....	....
14	....	....	71	284	725	1100	140	69	57	39	....	....
15	....	....	76	280	815	959	148	84	61	39	....	....
16	....	....	74	255	972	846	156	69	61	39	....	....
17	....	....	92	243	950	705	140	61	57	39	....	....
18	....	....	140	255	1020	689	133	65	57	39	....	....
19	....	....	156	318	950	633	126	79	57	39	....	....
20	....	....	146	446	882	537	148	79	54	37	....	....
21	....	....	156	415	928	478	146	120	50	37	....	....
22	....	....	178	495	950	469	145	232	50	37	....	....
23	....	....	220	665	905	502	144	243	48	37	....	....
24	....	....	241	665	1040	502	142	202	48	41	....	....
25	....	....	241	530	1060	462	140	318	45	41	....	....
26	....	....	189	446	1020	292	148	212	45	39	....	....
27	....	....	125	400	1040	255	133	192	45	37	....	....
28	....	....	148	400	1450	226	126	212	45	37	....	....
29	....	....	156	430	1340	280	120	165	45	37	....	....
30	....	....	170	585	1240	332	133	148	43	37	....	....
31	....	....	183	....	1160	....	114	192	....	37	....	....
Total	....	....	3110	10351	28521	24093	5148	3877	2105	1248	....	....
Mean	....	....	135	345	920	803	166	125	70.2	40.3	....	....
Max	....	....	....	665	1450	1280	318	318	165	54	....	....
Min	....	....	....	111	512	226	114	61	43	37	....	....
Acre-ft.	....	....	6170	20500	56600	47800	10200	7690	4180	2480	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Hermosa Creek Near Hermosa for 1922.

Drainage Area, 168 Square Miles. Altitude, 6,700 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	33	69	1040	827	209	74	38	....	....	....
2	....	....	33	66	1060	749	196	83	38	....	....	....
3	....	....	33	65	1080	619	182	69	38	....	....	....
4	....	....	34	72	1100	661	180	62	38	....	....	....
5	....	....	33	112	1210	762	180	47	38	....	....	....
6	....	....	32	148	1100	823	170	59	36	....	....	....
7	....	....	33	118	1030	854	156	44	36	....	....	....
8	....	....	37	106	880	1000	142	36	36	....	....	....
9	....	....	33	96	711	1000	134	44	36	....	....	....
10	....	....	34	90	475	955	128	41	36	....	....	....
11	....	....	33	79	360	862	118	40	36	....	....	....
12	....	....	32	80	287	827	102	40	36	....	....	....
13	....	....	32	85	320	801	94	40	36	....	....	....
14	....	....	35	91	412	677	90	40	36	....	....	....
15	....	....	36	112	511	602	85	40	36	....	....	....
16	....	....	36	104	518	578	85	42	39	....	....	....
17	....	....	35	97	663	564	84	42	39	....	....	....
18	....	....	36	126	889	567	85	44	36	....	....	....
19	....	....	35	310	943	530	88	44	36	....	....	....
20	....	....	39	532	876	494	90	42	36	....	....	....
21	....	....	48	728	939	470	83	40	36	....	....	....
22	....	....	65	707	966	437	78	38	33	....	....	....
23	....	....	100	623	1040	383	71	38	33	....	....	....
24	....	....	111	583	1080	350	67	38	33	....	....	....
25	....	....	94	564	1110	316	62	38	33	....	....	....
26	....	....	110	546	1140	303	50	36	30	....	....	....
27	....	....	111	602	1140	279	64	36	30	....	....	....
28	....	....	94	631	1120	260	70	36	30	....	....	....
29	....	....	74	792	1090	240	71	36	30	....	....	....
30	....	....	69	902	1060	225	65	36	30	....	....	....
31	....	....	69	....	966	....	92	38	....	....	....	....
Total	....	....	1629	9236	27116	18015	3371	1383	1054	....	....	....
Mean	....	....	52.5	308	875	600	109	44.6	35.1	....	....	....
Max	....	....	111	902	1210	1000	209	83	39	....	....	....
Min.	....	....	32	65	287	225	50	36	30	....	....	....
Acre-ft.	....	....	3230	18300	53800	35700	6700	2740	2090	....	....	....

Discharge of Florida River Near Durango for 1921.

Drainage Area, 96 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16	8.8	31	66	240	935	512	306	208	41	27	27
2	16	8.6	35	75	285	980	419	230	185	46	27	18
3	15	8.4	44	75	338	935	390	230	169	41	27	9.9
4	15	8.2	52	121	399	935	419	185	169	46	27	9.9
5	15	7.9	52	121	590	805	332	169	153	41	27	9.9
6	15	8.9	49	95	590	848	280	127	169	41	27	9.9
7	14	9.8	40	82	547	725	230	127	153	40	27	9.8
8	14	11	40	95	310	935	230	140	127	41	26	9.8
9	14	12	37	82	285	1290	208	127	94	41	21	9.8
10	14	13	37	95	260	1350	230	104	79	41	27	9.8
11	14	14	25	95	220	1350	255	104	83	41	20	9.8
12	13	15	27	121	220	1580	280	94	87	41	20	9.8
13	13	16	25	108	260	1530	255	104	74	37	20	9.8
14	13	17	31	108	285	1410	230	116	69	35	20	9.8
15	13	17	40	95	285	1350	390	94	65	40	20	9.8
16	12	18	44	147	504	1770	448	83	65	41	20	9.7
17	12	19	46	95	742	1130	390	83	62	37	20	9.7
18	12	20	66	95	793	848	280	74	62	37	20	9.7
19	12	21	61	95	504	650	230	104	56	40	20	9.7
20	12	22	66	95	430	688	208	306	48	34	20	9.7
21	11	23	66	95	367	578	280	688	51	34	20	9.7
22	11	24	61	108	260	688	255	448	56	34	20	9.7
23	11	25	66	121	310	765	230	578	51	27	20	9.7
24	11	26	66	121	240	725	306	614	51	27	20	9.6
25	10	27	66	108	240	650	390	419	48	27	20	9.6
26	10	28	56	121	285	614	448	306	48	27	20	9.6
27	10	29	61	121	430	578	332	255	55	27	20	9.6
28	9.8	30	66	121	690	614	280	208	48	27	20	9.6
29	9.6	....	66	121	1035	545	230	185	48	27	23	9.6
30	9.3	....	70	147	1097	545	255	94	48	27	27	9.6
31	9	....	66	181	972	....	255	255	....	27	....	9.6
Total	385.7	487.6	1558	3326	14013	28346	9477	6957	2681	1113	673	327.2
Mean	12.4	17.4	50.3	107	452	945	306	224	89.4	35.9	22.4	10.6
Max	16	30	70	181	1097	1770	512	688	208	46	27	27
Min	9	7.9	25	66	220	545	208	74	48	27	20	9.6
Acre-ft.	765	967	3090	6600	27800	56300	18800	13800	5320	2210	1330	649

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Florida River Near Durango for 1922.

Drainage Area, 96 Square Miles.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.5	9.7	17	54	368	782	365	140	45	....	....	....
2	9.5	10	17	54	402	855	337	140	45	....	....	....
3	9.5	10	17	76	402	935	312	140	45	....	....	....
4	9.5	10	17	102	587	1190	288	117	34	....	....	....
5	9.5	11	17	115	782	1290	267	117	34	....	....	....
6	9.5	11	17	93	782	1390	267	117	34	....	....	....
7	9.5	11	17	93	855	1480	267	96	34	....	....	....
8	9.5	12	22	93	715	1480	267	96	34	....	....	....
9	9.5	12	22	76	855	1860	180	117	34	....	....	....
10	9.4	12	22	63	782	1860	166	140	34	....	....	....
11	9.4	12	22	63	587	1960	166	140	34	....	....	....
12	9.4	13	22	63	536	1860	140	140	34	....	....	....
13	9.4	13	22	54	402	1860	129	166	34	....	....	....
14	9.4	13	21	54	444	1860	107	153	34	....	....	....
15	9.4	13	21	54	402	1860	68	140	34	....	....	....
16	9.4	14	22	76	402	1860	68	140	34	....	....	....
17	9.4	14	22	115	485	1860	68	117	34	....	....	....
18	9.3	14	22	115	536	1580	60	117	32	....	....	....
19	9.3	14	22	166	587	1660	60	96	30	....	....	....
20	9.3	15	23	208	587	1660	60	107	26	....	....	....
21	9.3	15	31	208	782	1660	60	96	26	....	....	....
22	9.3	15	31	208	782	1660	60	96	26	....	....	....
23	9.3	15	40	230	1100	1380	60	77	26	....	....	....
24	9.3	16	40	255	1290	1200	60	77	18	....	....	....
25	9.3	16	54	280	1390	1200	60	77	18	....	....	....
26	9.2	16	54	307	1480	938	45	77	18	....	....	....
27	9.2	16	54	334	1390	785	45	60	18	....	....	....
28	9.2	17	49	334	1390	715	45	60	18	....	....	....
29	9.2	....	44	368	1390	715	107	60	18	....	....	....
30	9.2	....	40	368	1190	715	117	68	18	....	....	....
31	9.5	....	54	....	1120	....	117	60	....	....	....	....
Total	290.6	369.7	895	4679	23412	42110	4418	3344	903	....	....	....
Mean	9.37	13.2	28.9	156	755	1400	143	108	30.1	....	....	....
Max	9.5	17	54	368	1480	1960	365	166	45	....	....	....
Min	9.2	9.7	17	54	368	715	45	60	18	....	....	....
Acre-ft.	577	733	1770	9280	46400	83300	8760	6630	1790	....	....	....

Discharge of La Plata River at Hesperus for 1921.

Drainage Area, 37 Square Miles. Altitude, 8,113 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.6	6.4	20	92	146	285	102	26	67	13	6.9	5.9
2	7.4	6.3	21	123	187	278	92	25	47	13	7.7	6.2
3	7.4	6.2	22	210	232	320	76	20	36	12	7.7	5.9
4	7.2	6.1	22	200	275	296	87	15	32	12	5.9	5.9
5	7.2	6.1	23	92	252	231	62	17	28	12	5.4	5.9
6	8.2	6	23	22	252	198	52	16	26	13	5.6	6
7	8.1	6.6	24	30	180	204	42	15	25	10	6.2	6
8	8	7.2	25	38	144	299	38	20	25	8.1	6.2	6.1
9	8	7.9	25	65	121	417	36	23	26	8.1	6.2	6.1
10	7.9	8.5	26	58	101	417	30	18	24	8.1	6.4	6.1
11	7.8	9.1	26	73	101	357	28	17	22	8.1	6.7	6.2
12	7.8	9.7	27	76	123	357	26	15	20	8.1	6.7	6.2
13	7.7	10	28	71	155	380	25	15	18	9.1	6.7	6.3
14	7.6	11	26	71	197	394	24	16	16	12	6.4	6.3
15	7.6	12	26	71	223	417	25	17	15	9.6	5.9	6.4
16	7.5	12	27	65	229	332	40	14	14	8.1	6.2	6.4
17	7.4	13	30	57	204	272	29	12	13	8.1	6.4	6.4
18	7.3	13	37	58	180	234	24	13	14	8.1	5.9	6.5
19	7.3	14	39	71	159	183	21	25	12	7.7	5.4	6.5
20	7.2	15	40	82	146	172	23	28	11	8.1	5.6	6.6
21	7.1	15	43	82	150	164	36	67	11	8.1	5.4	6.6
22	7	16	47	94	155	166	70	243	13	8.1	5.4	6.7
23	7	17	52	133	159	172	76	178	14	8.1	5.4	6.7
24	6.9	17	47	125	175	172	62	153	14	8.1	5.9	6.7
25	6.8	18	49	96	207	158	58	172	12	8.1	6.2	6.8
26	6.8	18	54	79	202	153	52	143	11	8.1	6.2	6.8
27	6.7	19	50	68	285	164	46	122	11	8.1	6.2	6.9
28	6.6	20	64	65	357	128	53	104	11	8.1	5.9	6.9
29	6.6	....	68	63	387	106	54	87	12	7.3	5.9	7
30	6.5	....	49	63	394	104	44	76	13	8.1	5.9	7
31	6.4	....	54	....	335	....	35	75	....	7.3	....	7
Total	226.6	326.1	1114	2493	6413	7530	1468	1787	613	283.8	1845	199
Mean	7.31	11.6	35.9	83.1	207	251	47.4	57.6	20.4	9.15	6.15	6.42
Max	....	....	68	210	394	417	102	243	67	13	7.7	7
Min	....	....	20	22	101	104	21	12	11	7.3	4.4	5.9
Acre-ft.	449	647	2209	4940	12700	14900	2910	3540	1220	563	366	395

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Plata River at Hesperus for 1922.
Drainage Area, 37 Square Miles. Altitude, 8,113 Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.1	5	3.1	9.7	233	261	105	16	9.4	....	....	....
2	7.1	4.9	5.1	9.3	254	240	87	15	9	....	....	....
3	7.2	4.9	4	9.7	288	202	75	14	8.6	....	....	....
4	7.2	4.8	4.3	12	300	236	73	13	8.3	....	....	....
5	7.3	4.8	3.7	18	371	247	70	13	8.3	....	....	....
6	7.3	4.7	6.7	25	317	250	59	13	15	....	....	....
7	7.3	4.7	7.4	28	284	268	53	12	8.1	....	....	....
8	7.4	4.6	6.2	26	236	317	47	11	8.1	....	....	....
9	7.4	4.6	6.2	24	183	343	35	18	8.1	....	....	....
10	7.5	4.6	7	24	129	300	27	21	8.1	....	....	....
11	7.5	4.5	6.2	22	103	360	24	18	8.1	....	....	....
12	7.5	4.5	6.2	24	91	221	21	16	8.1	....	....	....
13	7.6	4.4	5.4	25	84	236	21	16	8.1	....	....	....
14	7.6	4.4	5.1	26	93	248	21	16	8.1	....	....	....
15	7.7	4.3	5.1	28	105	209	20	15	8.1	....	....	....
16	7.7	4.3	5.9	30	117	209	19	15	8.1	....	....	....
17	7.7	4.2	7	29	162	202	20	15	8.1	....	....	....
18	7.8	4.2	7	28	247	200	21	14	8.1	....	....	....
19	7.8	4.1	6.4	30	264	188	22	14	8.1	....	....	....
20	7.9	4.1	6.2	47	247	167	21	14	8.1	....	....	....
21	7.9	4.0	6.2	79	254	162	21	13	7.9	....	....	....
22	7.9	4.0	6.7	115	268	162	16	13	7.9	....	....	....
23	8	3.9	7.4	175	326	172	13	12	7.9	....	....	....
24	8	3.9	8	155	261	167	11	12	7.9	....	....	....
25	8	3.8	7.4	160	261	162	10	12	7.9	....	....	....
26	8.1	3.8	6.7	155	276	140	11	11	7.8	....	....	....
27	8.1	3.7	7.4	160	272	136	12	11	7.8	....	....	....
28	6.6	3.2	7.4	180	244	117	11	11	7.8	....	....	....
29	5.2	....	8	172	362	111	11	10	7.8	....	....	....
30	5.1	....	9	197	390	115	16	10	7.8	....	....	....
31	5	....	9.7	....	326	....	15	9.7	....	....	....	....
Total	227.5	120.9	198.1	2022.7	7348	6348	988	423.7	250.5	....	....	....
Mean	7.34	4.32	6.39	67.4	237	212	31.9	13.7	8.35	....	....	....
Max	8.1	5	9.7	197	390	360	105	21	15	....	....	....
Min	5	3.2	3.1	9.3	84	111	10	9.7	7.8	....	....	....
Acre-ft.	451	240	393	4010	14600	12600	1960	840	497	....	....	....

Discharge of La Plata River at Colo.-N. M. Line for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14	3.2	48	63	72	129	2.6	16	27	10	5	13
2	14	4.1	48	80	116	103	2	10	23	10	6.5	13
3	14	4.1	48	80	174	80	2	8	23	8	6.5	10
4	14	4.1	63	103	225	116	2.6	8	19	8	6.5	10
5	14	4.1	92	116	225	116	2	5	19	10	6.5	13
6	14	4.1	72	103	225	63	2	4.1	16	13	4.1	16
7	12	4.1	63	92	144	63	2	3.2	16	13	4.1	16
8	10	3.2	48	72	158	63	2	2.6	13	10	4.1	16
9	16	3.2	42	92	144	158	1.7	80	10	10	5	13
10	14	3.2	36	92	92	282	1.7	23	8	10	5	23
11	10	3.2	42	103	72	302	1.7	16	8	6.5	5	23
12	14	3.2	42	116	63	302	2.6	10	6.5	8	4.1	23
13	12	14	48	103	63	263	10	8	5	8	5	16
14	10	16	48	103	63	282	5	13	5	6.5	5	16
15	10	16	63	103	80	385	4.1	10	5	4.1	4.1	13
16	10	18	63	92	103	408	3.2	8	4.1	3.2	5	10
17	10	23	63	92	129	225	3.2	6.5	2.6	2.6	6.5	13
18	10	23	72	80	103	158	2.6	8	2.6	2.6	6.5	12
19	12	23	72	80	80	174	2	16	3.2	2.6	8	12
20	14	31	80	80	63	103	48	16	4.1	2.6	10	12
21	8	31	63	80	48	72	103	42	5	2.6	13	11
22	9	23	56	80	42	48	72	63	5	2.6	10	12
23	6.5	27	63	103	42	36	63	80	5	2.6	10	12
24	5	36	56	144	56	32	32	56	5	5	10	11
25	6.5	56	63	144	56	27	32	92	5	6.5	16	12
26	6.5	48	63	129	63	19	23	56	5	5	10	11
27	4.1	63	63	103	92	10	27	42	5	5	10	12
28	4.1	48	56	80	158	8	27	56	6.5	5	10	12
29	4.1	....	56	72	174	6.5	16	48	6.5	5	10	12
30	4.1	....	63	63	208	5	19	36	6.5	5	10	12
31	4.1	....	63	....	174	....	16	36	....	5	....	11
Total	310	529.8	1818	2843	3507	4038.5	533	878.4	274.6	198	221.5	421
Mean	10	18.9	58.6	94.8	113	135	17.2	28.3	9.15	6.39	7.38	13.6
Max	16	63	92	144	208	408	103	92	27	13	16	23
Min	4.1	3.2	36	63	42	5	1.7	2.6	2.6	2.6	4.1	10
Acre-ft.	615	1050	3600	5640	6950	8030	1060	1740	544	393	439	836

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of La Plata River at Colorado-New Mexico Line for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14	12	23	64	308	138	0.4	0	0.4	....	....	....
2	16	10	23	64	328	106	0.2	0	0.4	....	....	....
3	16	10	23	79	344	71	0	0	0.4	....	....	....
4	14	11	32	116	360	64	0	0	0.2	....	....	....
5	12	12	43	116	376	64	0	0	0.2	....	....	....
6	12	10	28	87	440	71	0	0	0.2	....	....	....
7	14	10	32	87	424	71	0	0	0.4	....	....	....
8	....	9	24	43	216	269	28	20	23	....	....	....
9	13	12	28	87	273	96	0	0	0.4	....	....	....
10	13	14	28	71	246	87	0	0	0.2	....	....	....
11	12	14	32	79	196	64	0	0	0.2	....	....	....
12	12	14	38	87	172	50	0	0	0.2	....	....	....
13	12	12	32	79	160	32	0	0	0	....	....	....
14	12	12	116	71	149	28	0	0	0.2	....	....	....
15	12	10	116	79	149	28	0	0	0	....	....	....
16	12	12	149	106	138	15	0	0	0	....	....	....
17	12	12	246	96	149	5.7	0	0.2	0	....	....	....
18	13	12	127	79	208	3.4	0	0	0	....	....	....
19	14	14	138	87	246	1.7	0	0	0	....	....	....
20	13	16	127	106	184	0.7	0	0	0	....	....	....
21	12	18	116	149	196	0.7	0	0	0	....	....	....
22	11	18	138	196	208	0.4	0	0	0	....	....	....
23	12	20	138	260	233	0.4	0	0	0	....	....	....
24	12	20	138	246	246	0.4	0	0	0.2	....	....	....
25	12	24	96	246	233	0.4	0	0	0.2	....	....	....
26	12	24	106	246	233	0.4	0	0	0	....	....	....
27	12	26	116	233	246	0.7	0	0	0	....	....	....
28	12	32	79	260	246	0.4	0	0	0	....	....	....
29	12	....	64	276	208	0.4	0	0	0.2	....	....	....
30	13	....	64	292	208	0.4	0	0	0.4	....	....	....
31	12	....	64	....	208	....	0	0	....	....	....	....
Total	394	421	2532	4123	7645	1097.1	0.6	0.2	4.8	....	....	....
Mean	12.7	15.0	81.7	137	247	36.6	0.02	0.006	0.16	....	....	....
Max	....	32	246	292	440	138	0.4	0.2	0.4	....	....	....
Min	....	....	23	64	138	0.4	0	0	0.2	....	....	....
Acre-ft.	781	833	5020	8150	15200	2180	1.2	0.4	9.6	....	....	....

Discharge Mancos River near Mancos for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	8	24	35	163	282	81	21	70	....	....	....
2	....	8	26	48	259	256	68	13	62	....	....	....
3	....	8	32	51	324	264	65	12	51	....	....	....
4	....	8	37	82	338	282	68	11	41	....	....	....
5	....	8	34	62	346	230	45	12	34	....	....	....
6	....	8	26	61	338	233	45	12	26	....	....	....
7	....	9	24	48	243	220	41	16	23	....	....	....
8	....	9	24	43	216	269	28	20	23	....	....	....
9	....	9	25	62	175	279	28	22	20	....	....	....
10	....	9	29	73	158	321	25	18	17	....	....	....
11	....	12	29	98	158	321	20	19	17	....	....	....
12	....	13	28	89	170	302	20	19	17	....	....	....
13	....	18	24	78	201	282	22	17	14	....	....	....
14	....	21	28	78	261	450	21	17	14	....	....	....
15	....	11	28	75	296	728	24	36	15	....	....	....
16	....	21	28	75	381	590	60	14	15	....	....	....
17	....	13	32	73	358	431	26	12	14	....	....	....
18	....	12	36	72	335	351	24	11	15	....	....	....
19	....	12	38	89	264	315	23	20	14	....	....	....
20	....	13	36	108	233	247	184	25	14	....	....	....
21	....	11	32	94	228	194	84	60	13	....	....	....
22	....	12	30	100	240	206	77	163	12	....	....	....
23	....	17	31	147	236	194	62	116	11	....	....	....
24	....	18	31	158	253	187	38	108	10	....	....	....
25	....	22	35	132	299	175	31	141	9	....	....	....
26	....	23	38	114	261	170	26	102	8	....	....	....
27	....	24	28	100	307	148	24	84	8	....	....	....
28	....	23	28	100	366	118	34	84	8	....	....	....
29	....	....	32	96	344	86	25	81	8	....	....	....
30	....	....	35	118	346	96	20	77	8	....	....	....
31	....	....	33	....	307	....	22	81	....	....	....	....
Total	....	380	941	2559	8404	8227	1361	1444	611	....	....	....
Mean	....	13,6	30.4	85.3	271	274	43.9	46.6	20.4	....	....	....
Max	....	24	38	158	381	728	184	163	70	....	....	....
Min	....	8	24	35	158	86	20	11	8	....	....	....
Acre-ft.	....	755	1870	5080	16700	16300	2700	2870	1210	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Macos River at Mancos for 1922.

Drainage Area, 83 Square Miles. Altitude, ... Feet Above Sea Level.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	8	21	389	290	44	12	3	....	....	....
2	....	....	8	28	450	234	38	12	2	....	....	....
3	....	....	8	50	389	159	33	12	2	....	....	....
4	....	....	8	57	550	157	33	12	2	....	....	....
5	....	....	10	44	694	170	33	8	2	....	....	....
6	....	....	7	44	770	185	24	10	1	....	....	....
7	....	....	7	33	770	185	21	10	1	....	....	....
8	....	....	9	33	694	200	21	6	1	....	....	....
9	....	....	14	28	450	185	21	6	2	....	....	....
10	....	....	12	28	290	185	21	10	2	....	....	....
11	....	....	10	33	252	185	24	8	2	....	....	....
12	....	....	14	28	217	170	21	6	2	....	....	....
13	....	....	12	28	217	185	21	6	2	....	....	....
14	....	....	14	21	234	200	21	6	2	....	....	....
15	....	....	18	44	270	157	18	15	2	....	....	....
16	....	....	24	38	290	144	18	15	2	....	....	....
17	....	....	33	33	335	120	15	15	2	....	....	....
18	....	....	18	33	482	132	15	21	2	....	....	....
19	....	....	28	44	516	109	18	21	2	....	....	....
20	....	....	28	72	585	89	12	15	2	....	....	....
21	....	....	38	120	550	80	15	15	2	....	....	....
22	....	....	50	144	620	72	12	18	2	....	....	....
23	....	....	64	157	657	72	12	12	2	....	....	....
24	....	....	64	144	770	57	10	10	2	....	....	....
25	....	....	50	144	694	57	6	8	2	....	....	....
26	....	....	50	132	694	57	6	6	2	....	....	....
27	....	....	50	132	657	57	6	6	2	....	....	....
28	....	....	38	170	482	57	10	6	2	....	....	....
29	....	....	28	217	482	50	8	5	2	....	....	....
30	....	....	24	310	482	44	10	3	2	....	....	....
31	....	....	21	....	418	....	12	3	....	....	....	....
Total	....	....	767	2410	15350	4044	579	318	58	....	....	....
Mean	....	....	24.7	80.3	495	135	18.7	10.3	1.93	....	....	....
Max	....	....	64	310	770	290	44	21	3	....	....	....
Min	....	....	7	21	217	44	6	6	1	....	....	....
Acre-ft.	....	....	1520	4780	30400	8020	1150	633	115	....	....	....

Discharge of Mancos River at Towaoc for 1921.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	11	52	52	158	550	80	92	277	94	8	....
2	....	7	52	52	227	374	74	74	890	72	8	....
3	....	11	58	52	282	290	56	64	625	17	8	....
4	....	11	65	79	444	318	56	50	339	17	8	....
5	....	5	58	110	666	374	56	50	158	11	8	....
6	....	11	58	128	778	332	50	80	102	11	20	....
7	....	11	65	102	666	290	50	53	102	11	35	....
8	....	8	52	86	399	277	50	50	102	11	35	....
9	....	6	46	72	369	264	50	92	94	11	35	....
10	....	6	35	65	310	332	50	53	58	11	25	....
11	....	11	35	102	339	402	50	50	40	11	25	....
12	....	13	35	168	324	490	50	50	35	11	25	....
13	....	102	46	168	324	402	50	50	35	11	20	....
14	....	110	52	147	339	416	50	158	35	11	16	....
15	....	227	46	147	384	1400	50	105	35	11	16	....
16	....	58	65	158	506	1370	92	56	35	11	11	....
17	....	20	58	158	640	520	85	53	35	11	13	....
18	....	25	65	110	640	490	85	50	35	11	13	....
19	....	40	52	119	640	290	74	374	30	9	11	....
20	....	30	65	147	445	290	105	374	30	9	11	....
21	....	20	58	168	388	264	490	85	30	8	11	....
22	....	30	52	158	374	229	770	1810	25	8	11	....
23	....	25	40	168	360	186	460	655	25	8	11	....
24	....	30	40	268	374	176	374	346	25	9	11	....
25	....	52	46	240	430	176	264	1990	25	28	11	....
26	....	58	40	190	402	133	374	910	25	13	11	....
27	....	46	46	179	416	126	374	1780	35	11	20	....
28	....	52	52	128	475	126	640	565	35	11	25	....
29	....	....	52	128	550	126	388	290	102	11	16	....
30	....	....	52	158	580	85	176	520	65	11	16	....
31	....	....	58	....	625	....	176	360	....	11	....	....
Total	....	1036	1596	4007	13854	11098	5749	11289	3491	501	494	....
Mean	....	37.0	51.5	134	447	370	185	364	116	16.2	16.5	....
Max	....	227	65	268	778	1400	770	1990	890	94	35	....
Min	....	5	35	52	158	85	85	50	25	8	8	....
Acre-ft.	....	2050	3170	7970	27500	22000	11400	22400	6900	996	982	....

Unless otherwise noted, all discharges are in cubic feet per second.

Discharge of Mancos River near Towaoc for 1922.

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1........	....	....	19	39	498	344	25	0	0	....	....	....
2........	....	....	22	35	411	255	25	0	0	....	....	....
3........	....	....	31	35	545	200	20	0	0	....	....	....
4........	....	....	31	92	582	133	20	0	0	....	....	....
5........	....	....	42	165	794	144	16	0	0	....	....	....
6........	....	....	31	118	1080	122	13	0	0	....	....	....
7........	....	....	15	83	980	122	8	0	0	....	....	....
8........	....	....	41	54	932	122	5	0	0	....	....	....
9........	....	....	30	73	932	122	3	0	0	....	....	....
10........	....	....	126	81	453	122	1	0	0	....	....	....
11........	....	....	23	53	368	122	1	0	0	....	....	....
12........	....	....	29	44	344	110	0	0	0	....	....	....
13........	....	....	40	58	344	120	0	0	0	....	....	....
14........	....	....	129	44	344	130	0	0	0	....	....	....
15........	....	....	243	54	368	100	0	0	0	....	....	....
16........	....	....	284	60	422	95	0	0	0	....	....	....
17........	....	....	1060	45	422	70	0	0	0	....	....	....
18........	....	....	232	41	626	75	0	0	0	....	....	....
19........	....	....	167	51	884	65	0	0	0	....	....	....
20........	....	....	131	94	751	45	0	0	0	....	....	....
21........	....	....	91	210	840	45	0	0	0	....	....	....
22........	....	....	179	459	932	45	0	0	0	....	....	....
23........	....	....	194	642	932	40	0	0	0	....	....	....
24........	....	....	176	498	980	35	0	0	0	....	....	....
25........	....	....	149	384	932	35	0	0	0	....	....	....
26........	....	....	126	232	839	30	0	0	0	....	....	....
27........	....	....	104	182	708	30	0	0	0	....	....	....
28........	....	....	104	157	552	30	0	0	0	....	....	....
29........	....	....	80	422	422	30	0	0	0	....	....	....
30........	....	....	70	525	344	25	0	0	0	....	....	....
31........	....	....	52	....	344	....	0	0	....	....	....	....
Total	....	....	4051	5030	19905	2963	137	0	0	....	....	....
Mean..	....	....	131	168	642	98.8	4.42	0	0	....	....	....
Max....	....	....	1060	642	1080	342	25	0	0	....	....	....
Min.....	....	....	19	35	344	25	0	0	0	....	....	....
Acre-ft.	....	....	8060	10000	39500	5880	272	0	0	....	....	....

Unless otherwise noted, all discharges are in cubic feet per second.

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